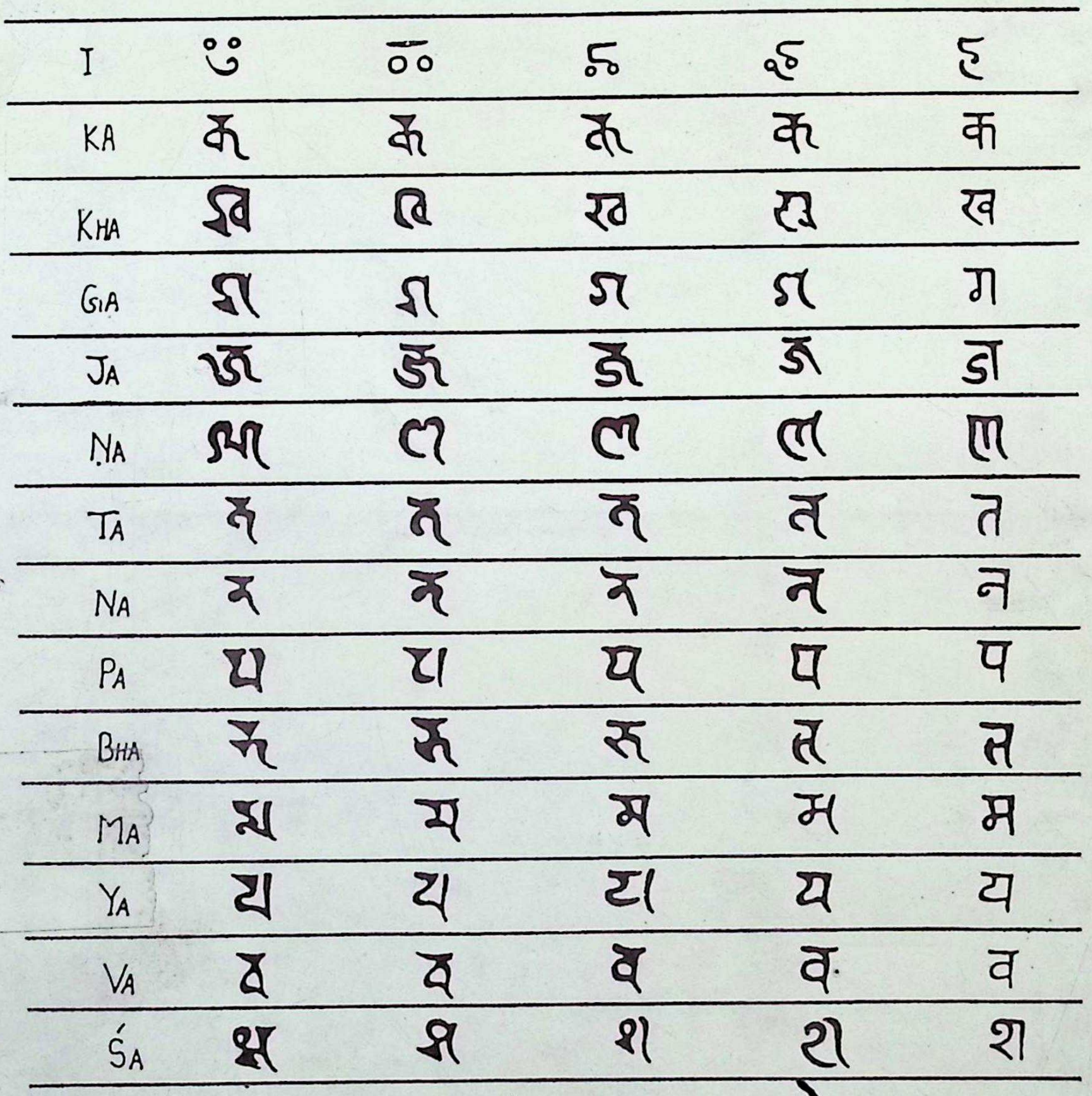
Development of Nāgarī Script


I
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A.K. SINGH

Development of Nāgarī Script

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Nāgarī is the outcome of evolutionary process of Mauryan Brāhmī script and any consideration on its independent origin is superfluous. From Mauryan to the middle of the sixth century A.D., only a few letters resemble counterparts in Nāgarī. While towards the end of the sixth century, with the emergence of the Kuṭila alphabet, the development in alphabet towards Nāgarī moves fast. Most of the letters, from the 7th century onwards undergo the process of development in forms of the letters with only the difference of full covering head-line and straight vertical. All characteristics of the Nāgarī appear first about the end of the 10th century and approaches mature Nāgarī form by the 13th century A.D.

There are some variations in the Nāgarī script of different regions due to various factors, namely the writing material, the writing technique, different schools of writers and engravers and their individual interest and mannerisms, etc. However, script maintains a sort of unity during the developmental process.

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DEVELOPMENT OF NĀGARĪ SCRIPT

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DEVELOPMENT OF NĀGARĪ SCRIPT

पुस्तकालय
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गुरुकुल कांगड़ी विश्वविद्यालय

111464

A. K. Singh

PARIMAL PUBLICATIONS
DELHI
1990

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491.430149
SIN- D

Published by
K. L. Joshi
for Parimal Publications
27/28 Shakti Nagar, Delhi 110007 (India)
Phone: 7127209

© Author
First Edition 1991
ISBN 81–7110–096–1

Computer Typeset by
Rastrix
1197, Sector D -1, Vasant Kunj, New Delhi 110030

Printed at
Deluxe Offset Printers
Daya Basti, Delhi 110035

Dedicated

to

My Rev'd late Grand-father (Babaji)

Preface

The Nāgarī script is now used over a large part of the Indian sub-continent for writing Sanskrit and some other Indian languages. But it is seldom realised by the common people that its origin lies in Brāhmī through a chain of successive variations. The question of the origin and development of Nāgarī has been summarily dealt with in the works on Indian palaeography and a few other writings, but so far we have had no independent work dealing with the subject in a scientific perspective. The present work aims at meeting this long-felt desideratum which is an out-come of my research for the degree of Ph.D. of the Banaras Hindu University.

I have investigated into the development of the Nāgarī Script only upto the 13th century A.D. This cut-off point has been chosen because by this time, the development of the Nāgarī alphabet reached its maturity and during the following centuries it became almost stagnant. The bulk of the work contains illustrations of alphabets selected from different inscriptions and manuscripts.

The present work is divided into seven chapters dealing with the different stages of the development of Nāgarī. The first one is an introduction dealing with the subjects, such as various theories on the name Nāgarī and Devanāgarī, its main features and also gives a fair idea of the nature of Mauryan Brāhmī tracing the development of individual letter-forms including ligatures and medial signs met with in this prototype. It also gives a reasonable account of various factors which were responsible for the development of the Brāhmī script. It is followed by a detailed account of the Kuṭila variety, a post-Gupta development from Brāhmī, which represents an important developmental stage between Brāhmī and

Nāgarī, in the next chapter. This Kuṭila script further developed into the proto-Nāgarī and forms the subject matter of the third chapter. The fourth chapter deals with the maturing of the Nāgarī script during the three centuries from 11th to 13th centuries towards the end of which the evolutionary process became almost stagnant. The pace of scriptal evolution in monumental records like stone and metallic inscriptions and manuscripts was not uniform. Hence Nāgarī alphabet, as found in manuscripts dating from the 11th to the 13th century A.D. is dwelt upon with the help of selected manuscripts in the fifth chapter. The next chapter is devoted to the development of numerals and other signs. The seventh chapter is the concluding one, dealing with the factors responsible for the development and migration of the script from one region to the other from time to time.

However, I am aware of the limitation and the methodological problems involved in this kind of work. It has not been practicable to examine each and every inscription, manuscript and coin in the original and therefore I have had to depend on photographic reproductions. Such photographs have their own limitations. It has also not been possible to illustrate all specimens, therefore only representative forms have been selected for illustration.

I am deeply indebted to all those scholars who have worked in the field of palaeography. Their studies served me as a valuable background in the completion of this work.

It is my privilege to express my sincere gratitude to all those persons who have helped me in various ways, to complete this work. First of all I am under a heavy debt of gratitude to my venerable teacher, Dr. T.P. Verma, Reader in the Department of Ancient Indian History, Culture and Archaeology, Banaras Hindu University, Varanasi for his kind guidance and suggestions.

I am particularly thankful to Prof. M.A. Dhaky, Associate Director (Research), American Institute of Indian Studies, Ramnagar, Varanasi who went through the manuscript and gave valuable suggestions.

I express my sincere thanks to Prof. A.K. Narain, Prof. Lallanji Gopal, Prof. P. Singh, Prof. A.M. Shastri for their kind help.

My thanks are also due to my friends who have helped me in various ways, but whom it is not possible to list here.

My thanks are also due to the librarians of Banaras Hindu University; American Institute of Indian Studies; National Library; Asiatic Society of Bengal library; Asiatic Society of Bombay library for their kind help.

I am indebted to Prof. R.N. Misra, Dr. R.P. Pandey and Dr. B.R. Mani for their constant encouragement and support during the publication. Other colleagues and members of our School variously helped me. I am thankful to all of them.

Lastly, the author expresses his deep gratitude to M/s Parimal Publications not only for undertaking the publication of this work but also for publishing this work within the minimum period of time and with best possible get-up and printing.

Gwalior **A. K. Singh**

Transliteration Table

A	Ā	I	Ī	U	Ū	ṚI	E	AI	O	AU	AṀ	Ḥ
अ	आ	इ	ई	उ	ऊ	ऋ	ए	ऐ	ओ	औ	अं	:

KA	KHA	GA	GHA	ṄA
क	ख	ग	घ	ङ

CHA	CHHA	JA	JHA	ÑA
च	छ	ज	झ	ञ

ṬA	ṬHA	ḌA	ḌHA	ṆA
ट	ठ	ड	ढ	ण

TA	THA	DA	DHA	NA
त	थ	द	ध	न

PA	PHA	BA	BHA	MA
प	फ	ब	भ	म

YA	RA	LA	VA	ŚA	SHA	SA	HA	KSHA
य	र	ल	व	श	ष	स	ह	क्ष

Abbreviations

ABORI	Annals of the Bhandarkar Oriental Research Institute
ARSIE	Annual Report in South Indian Epigraphy
ASI, AR	Archaeological Survey of India, Annual Report
ASI, ARIE	Archaeological Survey of India, Annual Report of Indian Epigraphy
ASIR	Archaeological Survey of India Report
ASWIR, AKK	Archaeological Survey of Western India Report on the Antiquities of Kāthiāwād and Kachh
BORI	Bhandarkar Oriental Research Institute
CII	Corpus Inscriptionum Indicarum
CMJB	Catalogue of Manuscripts in Jaisalmer Bhandar
CMPB	Catalogue of Manuscripts in Paṭaṇ Bhandar
EI	Epigraphia Indica
IA	Indian Antiquary
IAR	Indian Archaeology: A Review
IC	Indian Culture
ICTWI	Inscriptions from the Cave Temple of Western India, Burgess & Bhagawanlal Indraji, Indian India, 1976
IHQ	Indian Historical Quarterly
JA	Jain Antiquary

JAHRS	Journal of the Andhra Historical Research Society
JAS	Journal of the Asiatic Society
JASB	Journal of the Asiatic Society of Bengal
JASL	Journal of the Asiatic Society Letter
JBBRAS	Journal of the Bombay Branch of Royal Asiatic Society
JBORS	Journal of the Bihar and Orissa Research Society
JBRS	Journal of Bihar Research Society
JESI	Journal of the Epigraphical Society of India
JIM	Journal of Indian Museum
JMPIP	Journal of the Madhya Pradesh Itihas Parishad
JOHRS	Journal of the Orissa Historical Research Society
JOI	Journal of the Oriental Institute
JPASB	Journal and Proceedings of Asiatic Society of Bengal
JRAS	Journal of the Royal Asiatic Society of Great Britain and Ireland, London
JRASBL	Journal, Royal Asiatic Society of Bengal Letters
JUPHRS	Journal of U.P. Historical Research Society
JUPHS	Journal of the United Provinces Historical Society
KI	Karnataka Inscriptions
MASI	Memoirs of the Archaeological Survey of India
MS	Monuments of Sāñchī
NPP	Nāgarī Prachāriṇī Patrikā, Varanasi (Hindi)
YIAJ	Yādava Inscriptions from Ambe Jogi

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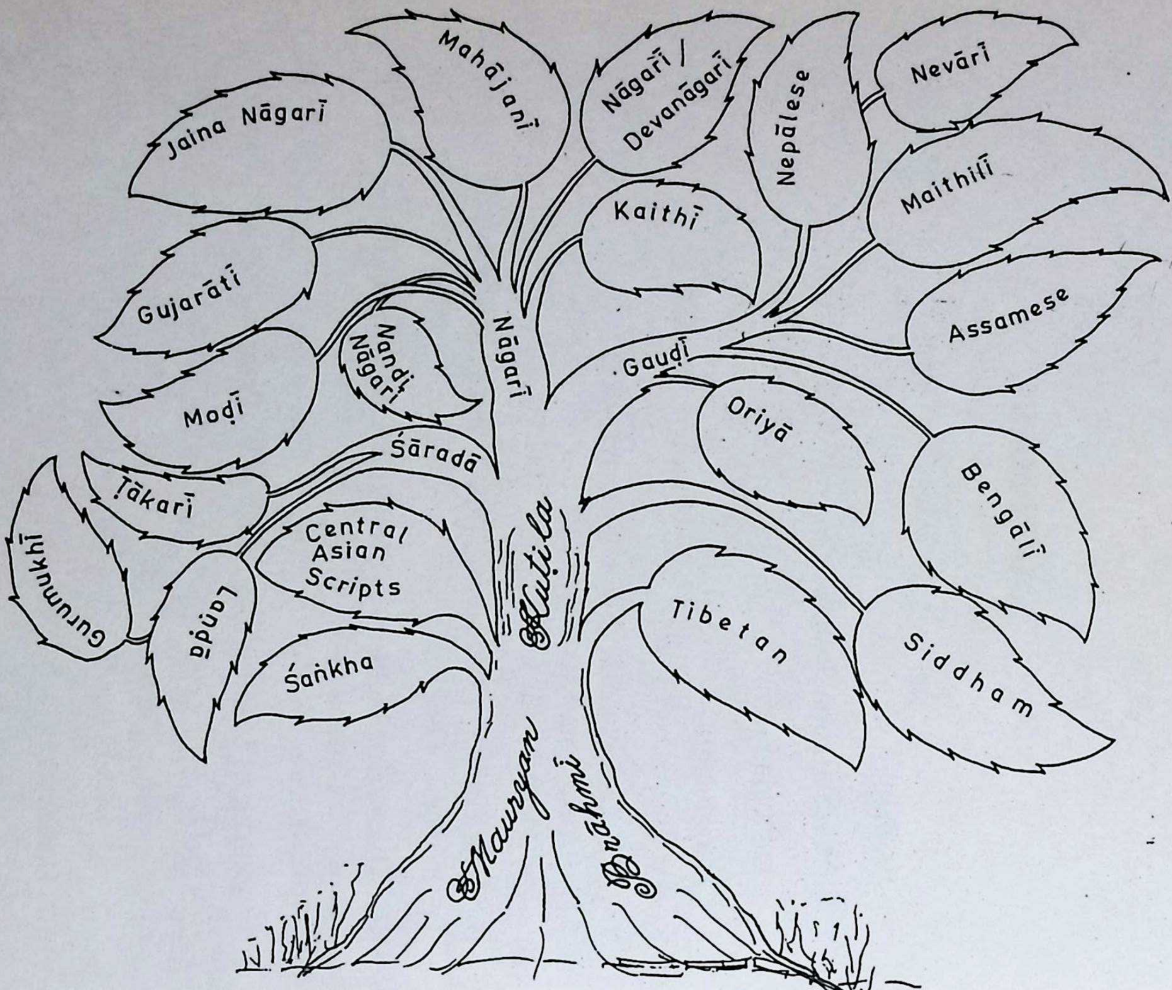
Jaina Nāgarī
Mahājanī
Nāgarī / Devanāgarī
Nepālese
Nevārī
Maithilī
Kaithī
Gujarātī
Assamese
Nandi Nāgarī
Nāgarī
Gauḍī
Moḍī
Oriyā
Śāradā
Ṭākarī
Bengālī
Central Asian Scripts
Gurumukhī
Laṇḍā
Kuṭila
Tibetan
Siddham
Śaṅkha
Mauryan
Brāhmī

DEVELOPMENT OF THE NORTH INDIAN SCRIPTS

1

Introduction

The Nāgarī script (also known as Devanāgarī) is prevalent in a large part of the Indian sub-continent and employed for writing different regional languages. It has developed ultimately from the script popularly called the Mauryan Brāhmī. During earlier centuries, the various stages of its development can be discerned; however, by which appellation/s these scripts were known among the contemporary peoples is as yet unknown The historians and palaeographers prefer to call them Śuṅga, Kshatrapa, Kushāṇa, Gupta, or Later-Gupta script, depending on the period and region. While it is certain that those scripts were precursors of the present Nāgarī, it is hard to ascertain whether Nāgarī was the appellation by which it was known between first to eighth centuries A.D. The present work is addressed to investigate into this problem.

The Appellation Nāgarī

Various etymologies have been suggested for the word Nāgarī. On the basis of the *Lalitavistara* (*c*. 5th–6th Cent. A.D.), A.C. Burnell[1] is inclined to believe that it was the 'nāga-lipi' (serpent writing). But L.D. Bernett[2] found no connection between the 'nāga-lipi' and the Devanāgarī script. Furthermore, there seems no etymological relation in the formation of the word 'Nāgarī-lipi' from 'nāga-lipi' or vice versa.

One other hypothesis explains it as the writing of the "Shāh" (Kshatrapa) kings of Gujarat, reigning before fourth century A.D. who were called the *nāgas* or snakes.[3] This is only a conjecture without evidential foundation.

A.H. Dani,[4] however, is positive that it was derived from *varṇanāga*, which occurs in the compound *varṇa-nāga-kṛipāṇikā* in the Mahākāleśvara Temple Inscription (of the reign of Paramāra Naravarmā, A.D. 1094–1133).[5] But this derivation also cannot be accepted as the word *varṇa-nāga-kṛipāṇikā* simply means the alphabet written in the shape of a serpent and sword.

N.N. Vasu, after discussing the opinion of various Paṇḍits whom he consulted, concluded that "This alphabet was first devised by a class of men, designated Nāgara, and in a certain place also called Nagara."[6] This explanation, too, is unacceptable as the Nāgarī script does not seem a corporate invention by a set of persons but it is evidently the ultimate consequence of the progressive evolution of the Mauryan Brāhmī script.

In *Hindī Śabdasāgara* (A.D. 1968)[7] it is recorded that when the script of Northern India was introduced in Gujarat under the aegis of the Rāshṭrakūṭas and was used by the Nāgara Brāhmaṇas, it was given the name Nāgarī. But there seems no historical basis for accepting such an explanation.

Hiranand Sastri[8] on the other hand is of the opinion that it was the alphabet of the Nāgaras or the highly cultured people. But F. Max Müller,[9] W.D. Whitney[10] and David Diringer[11] thought that the reason behind the formulation of the term Nāgarī is unknown. If derived from *nagara* (city) it would simply mean that the art of writing was first practiced in the cities. But this theory also cannot be conceded since no specific city can be named as the seat of origin.

V.S. Agrawala,[12] on his part opines that it was the script connected with *nagara*, which he identifies, on the authority of the play *Pādatāḍitakam* (*c.* 5th Cent. A.D), with Pāṭaliputra. K.D. Bajpai[13] likewise identifies *nagara* with Pāṭaliputra. But Anant Chaudhari[14] theorised that the Kuṭila script refined by the Nāgaras (clever Paṇḍits) of Pāṭaliputra *nagara* during 8th–9th centuries, is the cause of the appellation Nāgarī. This refined form of course, was simple and efficient in writing as compared to the Kuṭila letters; hence the persons of that period gave honour to call it by the name Nāgarī (the perfect script of the Nāgaras of *nagara*).

While it may be conceded that Pāṭaliputra was called *nagara*, it does not *ipso facto* follow that the script used in or around that particular city alone was termed Nāgarī.

Śesha Kṛishṇa, the author of the *Prākṛit Chandrikā* (*c.* A.D. 1050) has recorded twenty-seven *apabhraṁśas*, two of which are named Nāgara and Upanāgara.[15] According to G.A. Grierson,[16] the close connection of Nāgara *apabhraṁśa* with Saurasenī Prākṛita of Central Gangetic Doab, points to the probable region of its use. This region has been the seat of the Nāgarī script from the beginning uptil now. Finally, T.P. Verma[17] believes in the growth of the regional languages and their employment in written literature. Against this background it is somewhat safer to assume that the script that was used for writing the Nāgara *apabhraṁśa*, possibly came to be known as Nāgarī.

Here it can be recalled that at least three items are associated with the Nāgara or Nāgarī. These are Nāgarī script, Nāgara and Upanāgara *apabhraṁśas* and the Nāgara style of temple architecture. It is noteworthy that the geographical extension of all these three are almost the same, i.e. the whole of northern India excluding Punjab in the West and Bengal in the East. The alternative name for the Nāgara style of temple architecture is Indo-Aryan given by Fergusson.[18] T.P. Verma[19] has discussed the problem in some detail in some other context. Stella Kramrisch believes that the "ternary, Nāgara, Drāviḍa and Vesara is in agreement with three-fold geographical division of India into the North, the Deccan and the South."[20] If we accept this, the burden of our problem is slightly reduced because when we are not able to determine precisely the meaning of the term Nāgarī we can indicate its geographical limits. We can assume that perhaps

Nāgara or Nāgarī had a definite geographical connotation about which our predecessors had no ambiguity. They used this term by prefixing Deva–, Jaina–, Nandi– for scripts and Nāgara and Upanāgara for *apabhraṁśas* as well as for a definite style of temple architecture prevalent in a definite area.

Antiquity of the name Nāgarî

Considering the antiquity of the term 'Nāgarī', we find that the Jaina commentators Maladhāri Hemachandra Sūri (of Harshapurīyā Gachchha, A.D. 1118)[21] and Malayagiri (*c*. 2nd-3rd quarter of the 12th Cent. A.D.)[22] mention Nāgarī in their commentaries. This indicates that the Nāgarī appellation had become popular by the 12th century A.D. In point of fact, Hemachandra Sūri quotes an ancient verse, possibly of the tenth or the eleventh century A.D.; to the effect, which indicates that the name Nāgarī was known even a few centuries prior to the 12th century A.D.

Al-Beruni, who visited India (*c*. A.D. 1030) with Mohammed of Gazanā, mentions Nāgara–a script which was used in the Mālava country.[23]

Vasu[24] averred that the first mention of the Nāgarī script is encountered in the Jaina *Nandisūtra* (of Devavāchaka, *c*. mid. 5th Cent. A.D.). However, there is no mention of Nāgarī script at all in the selfsame work. Strangely, Vasu does not give the exact reference of this work and only quotes 18 lipis from the Jainā̆chārya Lakshmi-Vallabhagaṇi's *Kalpasūtra-Kalpadruma-Kalikā*, commentorial work of as late as 17th century A.D.

Perhaps the Nāgarī script became famous by the name Devanāgarī in later period. But the date when this appellation came into use is controversial. Rai Bahadur Bishun Śvarup[25] thought it of as early as 1700 B.C., which in course of time lost the name revived lately to indicate that the script was used in upper India, including Banaras, the seat of Sanskrit learning. This is an improbable conjuncture.

However, M.R. Kale tries to define the word in his own way. According to him, "The Aryans who were much fairer in colour than the aborigines of

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India are the Devas referred to in the name Devanāgarī (from *Div* to shine, those of a brilliant complexion); and Nāgarī means the Aryan settlements within the precincts of which the sacred language was spoken."[26] Like that of Bishun Śvarup this suggestion is also widely off the mark.

R. Shamsastry[27] takes back the Devanāgarī script to pre-Aśokan or in *Tantric* (*Atharva-Veda*?) period. But leaving aside the date of the *Tantric* literature referred to by him, the word Devanāgarī does not appear to have been used in any work till late medieval times.

Some European scholars had looked into the problem in their own way. Isaac Taylor writes, "The term Devanāgarī, which would mean the divine or sacred Nāgarī, is not used by the natives of India, and it seems to have been invented by some ingenious Anglo-Indian about the end of the last century."[28]

Similar is the view of J. Filliozat[29] who holds that the name appears for the first time in the European reports of the seventeenth century. But such views cannot be given much weight and should be discarded as far fetched.

The Appellation Devanāgarī

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The term Devanāgarī has been defined in many different ways. Shamasastry suggests that the Brāhmī itself is derived from *Tantric* symbols, which were called Devanagara – the abode of the gods – and the script derived, therefore, was consequently Devanāgarī.[30] It is, however, difficult to accept this view, because, Nāgarī or Devanāgarī is the evolved form of Brāhmī script and the works which list the scripts of ancient India do not include Nāgarī or Devanāgarī.

As noted above, Max Müller, Whitney and Diringer mention 'Devanāgarī' as 'Nāgarī of the gods or of the Brāhmaṇas.' According to R.K. Lohia, Devanāgarī means gift of '*Deva*' (God) to '*nāgarikas*' (citizens) so that they can communicate and transfer the treasure of knowledge and cultural heritage from generation to generation through the media of writing.[31] George Thomas Kurian, too, defines it as the script of the divine city.[32] These definitions, however, interpret the term from a legendary or metaphorical stand point.

Bajpai[33] is of the view that the Nāgarī script was christened Devanāgarī when Sanskrit, the language of the Vedas, employed it. Chaudhari[34] likewise believes that the name Devanāgarī was derived on the resemblance of Devavāṇī Sanskrit. But this view too rests on slender foundations. It is evident that Sanskrit was being written in Brāhmī and its derivative scripts from the very beginning, hence the question of Nāgarī being associated with Sanskrit is unwarranted. Here we may agree with H.R. Kapadia, that "One will not be completely unjustified to believe that the name Devanāgarī is not so old as Nāgarī."[35]

However in the present state of knowledge, it is not possible to settle the problem finally but it can be indicated that the term Nāgara or Nāgarī denoted some geographical area or region. The term is mentioned in the Silpaśāstras (10–11th century) and the Hoḷal inscription (12th century) as well as in Jain commentaries (referred to above) by Malayagiri and Hemachandra. Here, it must be admited that the term Nāgarī is not found earlier than the 10th–11th century A.D. It is, however, futile to discuss the appearance of a word in this or that work because such words are recorded in works long after getting currency among the people.

Earlier Stages

Brāhmī is the earliest known historical script of India. In the present state of our knowledge there is no specimen of Brāhmī which can be definitely assigned before the Mauryan times. The Mauryan Brāhmī was formed by simple geometrical configurations like horizontal and perpendicular lines, angles and triangles, circles and semi-circles, curves and dots, etc. Nāgarī placed alongside Mauryan may seem vastly different in appearance.[36] However, passing through the various developmental stages, some or the other part of every letter of the Mauryan Brāhmī is still retained in the Nāgarī forms with only some ornamental or simplified additions and modifications.

In the natural process Brāhmī developed continuously at least from the time of Aśoka. But there are some remarkable stages of its development which may be arranged under six groups. The incipient stage is of course the Aśokan Brāhmī, shown in Table A of Text Fig. 1(a–b).* The alphabets of the Kshatrapa and pre-Kushāṇa period represent a distinct phase, shown in Table B in which the vertical is tapering and reduced. The adoption of cursiveness made transitional phase of the Brāhmī of the Kushāṇa period, of which some distinction of eastern and western forms are shown in Table C (a & b). The next stage of development of Brāhmī is noticeable in Gupta period, shown here in Table D (a & b). Under the Aulikaras, Western variety, or Mālava style of writing progressed more distinctly which is illustrated in Table E. In the inscriptions of the Maukharis, Western Indian influence and further development in some letters are seen (Table F); and in the subsequent stage Brāhmī is transformed into the Kuṭila script.

Developmental Stages of Individual Letter Forms

The development in the forms of the Brāhmī letters was continuous and any talk of developmental stages is to be understood as hypothetical. However, for the sake of facile comprehension of the process of development, I have here grouped these forms into six stages. The detailed and minute description of the palaeographical study of all these developmental stages is out of consideration. For our purpose it will suffice to examine chronologically only the main peculiarities of the alphabets which lead to the evolution of the Kuṭila, or the Nāgarī characters.

Vowels

The initial *a* of the Mauryan Brahmi is of various types, of which 'angular' and 'cursive' are two main varieties. Table B shows the growth into a thick top and inner curve in the lower left limb. The vertical stroke in Table C is considerably lengthened. This letter rapidly evolves in the Gupta period (Fig. 3). In an advanced form, the left limb hangs down from the triangular head and ends in a hook open to the left instead of the right curve. In column F (Fig. 1) two arms of the lower curve are shown projected from the left vertical. The Maukharis also employed this form and this is the real source from which the Kuṭila and the Nāgarī features ultimately evolved.

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* All references to Tables in this Chapter refer to Text Figures and not Plates.

The long *ā* is formed by adding a horizontal bar, on the top, or in the middle to the right of the vertical stroke of the initial letter *a* in its earliest stage. But, in Kushāṇa period, horizontal bar had been transformed into a leftward curve or hook and placed in the lower end of the vertical. This form continued for a long time and at last a vertical line to the right developed in Nāgarī.

I of Tables A, and B are represented by three dots arranged triangularly. In Kushāṇa period dots developed into short lines, two of which are placed one upon the other and the third one is a vertical line to the right of these two. In Gupta period a form is seen in which the vertical line is lengthened beside two dots in place of the other two short lines. However, in general, it is in the form of three dots of which the apex is downwards. Table F shows a distinct phase with lower dot developed into a curved or tailed form. This form is retained in the Kuṭila script.

Mauryan *u* is formed by two straight lines meeting generally at the right angle. The same form continued for a long time only with the addition of broad head and some changes in the angle. In the early Gupta period a horizontal bar developed into upward curve; while in post-Gupta period the curve is lowered and turned to the left (Fig. 3). The lower portion grows into an elegant curve in Table E and F (Fig. 1).

Triangle is the shape of Mauryan letter *e* with its apex laid at various directions. This shape remained unchanged for a long time; then developed into a flat-topped variety. Tables E and F show further growth in which the top is flat, right portion is in vertical shape and left limb curved in a bulgy manner. From this shape Nāgarī form eventually evolved.

The initial *o* is formed by two horizontal lines joined by a third slanting line at its either end. Table B shows a feature in which vertical is inclined with angularized shape. In Kushāṇa period angles become cursive.

The initial *au* is rarely employed in ancient inscriptions. To trace its development four specimens (Fig. 3) have been taken from the Turfan manuscript of *Kalpanāmaṇḍiṭikā* (early 5th Cent. A.D.),[37] the Bihār Koṭrā Inscription of Naravarmā (A.D. 417),[38] the Bower manuscript (early 6th Cent. A.D.)[39] and the Mandasor Inscription of Yaśodharmā (A.D. 530).[40] Of these, the first form is formed by adding a horizontal stroke to the right of the Mauryan letter *o*. In the second stage, upper portion become cursive and additional stroke bends downwards. Further, the base of the letter is curved to left as in *u* and another curled stroke goes up from mid-angle. Finally, lower curve further prolongs in an elegant curly shape and the joined curve at the right also extends with a rightward bend.

Consonants

Simple Aksharas

Gutturals

A simple cross is the form of Mauryan *ka*. The vertical takes a tapering shape and lengthens in pre-Kushāṇa period. In the time of the Kushāṇas, the top vertical develops into a triangle head and the horizontal bar is slightly curved. The head-mark and horizontal curve become more prominent in the post-Kushāṇa period.

The letter *kha* of the Mauryan Brāhmī is shaped like a hook with a circle at the lower right limb. Lower circle develops into a large triangle and hook is shortened in pre-Kushāṇa and Kushāṇa period (Tables B & C). Occasionally, left limb of the Gupta *kha* shows a foot-mark, and the right limb an inner curve (Table D, a–b). In post–Gupta period, inner triangular shape with slanted base is the feature of the letter.

Asokan *ga* is generally an angle with its apex at the top. In Table B, the angle is curved and takes a shape like the horse-shoe. Round-topped *ga* became a standard form in the Kushāṇa Brāhmī in which optionally the left limb shows a foot-mark and right one is extended. From the time of the Guptas, upper portion is almost flat; and foot-mark of the left limb develops into a solid triangular shape (Table F).

The letter *gha* of Table A is represented as a fish-hook with a vertical stroke in the middle of the curve. Further, the curves of the letter are angularized with flattened base and verticals are almost equalised (Tables B & C). In the Gupta period, middle stroke comes closer to the right vertical. From the time of the Aulikaras this letter undergoes a fundamental transformation in which the base of the right half slants, the left one curves, thus forming an acute-angle (Kuṭila).

The letter *ṅa* is not met separately. In the ligatures, it is in a cursive (Fig. 2, D); or angular (Fig. 2, E) form.

Palatals

In Mauryan Brāhmī letter *cha* is formed by drawing a semi-circle to the bottom left of a vertical line. From the time of Mathurā–Śaka Kshatrapas the vertical of the letter became gradually short and bears a triangular head-mark. The loop of the letter develops into crescentic shape; which further takes beaked shape in the post-Gupta period.

The Mauryan *chha* is represented by an oval appendage, bisected by a vertical line almost in the middle. Table B shows the fundamental change by which oval shape developed into a double-looped shape, the vertical reduced with thick top. Without any noticeable change this form continued in the Kuṭila script.

Tables A and B show a form of *ja*, formed by two semi-circles placed one upon the other. However, the vertical form of the letter became common in later periods. Gradually, the lower arm of the letter is slanted from the time of the Kushāṇas; and occasionally, vertical line shows an inner bend from the time of the Guptas.

The letter *jha* is rarely met. In most of the specimens, from the time of Aśoka, the letter is formed by adding an angular hook to the right of a vertical line in such a position that the mouth opens upward.

The letter *ña* is also rare, formed by adding a downwards open angular hook to the right in a vertical line. With some minor developments, such as the prolongation of the vertical line in Mathurā–Śaka Kshatrapas inscriptions, this form continues for a long time.

Linguals

From the Mauryas to the Kushāṇas, letter *ṭa* is shaped like a semi-circle. Sometimes, in Gupta period, top of the letter developed into a flat horizontal bar. In Maukhari, top end became broader.

The circular form of the letter *ṭha* is retained in all the developmental stages.

The Mauryan *ḍa* is represented as a horizontal line with two vertical lines joining at either end in which the left extends to the down and the right to the up. In later varieties, the top-vertical is shortened and the lower one bends to right (Table B). The form in the Gupta period, with curved back and lengthened leg, shows further progress. In the Aulikara and Maukhari specimens the leg is further prolonged.

Ḍha of the Mauryan Brāhmī is formed as a semi-circle with spiral at the lower and a vertical stroke at the upper end. Basically, the same form continues till now.

The Mauryan *ṇa* is represented as a vertical line with two horizontal strokes at either ends. In pre-Kushāṇa Brāhmī the vertical is reduced. The letter makes revolutionary progress in the Kushāṇa period, of which even an open-mouthed variety is noticed (Fig. 3). From the time of the Guptas, open-mouthed form of the letter became a standard form. Progressively, the outer curve of the letter prolongs in the Maukhari inscriptions.

Dentals

The letter *ta* of the Mauryan Brāhmī reveals several varieties namely angular, slanted, curved. In the pre-Kushāṇa and Kushāṇa Brāhmī; it is, in general, represented with a head-marked, short vertical line and a horse-shoe like lower portion. From the time of the Guptas, lower right limb is prolonged and the top becomes triangular.

A circle with a dot in its middle is the form of the letter *tha* from the Mauryan times upto the Kushāṇas. Gupta inscriptions exhibit faster evolution in which, progressively, the circle became slightly elliptical with a central dividing line in the place of the dot. The letter undergoes further progress in the Maukhari period (Table F) in which right limb becomes straight and left is formed in a bulging fashion.

The Mauryan *da* is a semi-circle, opening to the left, with its ends prolonged vertically to the top and bottom. The pre-Kushāṇa period is a transitional one from the viewpoint of the development, best understood by the forms of the letter shown in Fig. 3. In post-Gupta period its curve becomes a sort of double-curve (Fig. 1, Tables E & F).

The Mauryan *dha* is represented as a semi-circle with its vertical to the left or sometimes to the right also. But after Aśoka the latter variety gained more currency. In post-Gupta period the lower limb becomes angular.

The letter *na* of the Mauryan Brāhmī is formed by a vertical line with a slightly shorter horizontal line at the bottom. In pre-Kushāṇa, vertical line is reduced with a clear head-mark. This letter undergoes a revolutionary development in Kushāṇa period (Fig. 3). First it bends its base to various degrees and finally develops into a looped form in Kauśāmbī region. In the eastern script of the Gupta period looped form of the letter is more common. In the post-Gupta period, vertical starts with triangular top, slightly inclined to the right and a loop forming to the left bends downwards.

Labials

A fish-hook drawn to the right is a shape of the Mauryan letter *pa*. In pre-Kushāṇa period verticals are equalized in which usually the left and optionally both verticals are marked with triangular top; and the base is curved with angularized bends. From the time of the Kushāṇas only the left limb bears a head-mark; and in the post-Gupta scripts base of the letter is slightly slanted.

The letter *pha* is represented by adding an inner curl to the hook of *pa* in Mauryan Brāhmī. In Gupta period, the curl of the hook develops into a loop touching the base in the middle. In post-Gupta inscriptions, loop of the letter is compact and the base is sloppy.

The letter *ba* has a square or rectangular shape from Aśoka till Maukharis with slight variations.

The shape of the Mauryan *bha* is formed by adding an additional parallel stroke to the right from the lower stroke of the letter *ḍa*. Tables B and C show two main varieties — in the first form right portion developed into a vertical line and left into curved shape with or without notch; while in the second, lower portion becomes broader. In Gupta period, both limbs of the letter hang from the top-mark in angular shape. The post-Gupta inscriptions reveal quick evolution in the letter form which may be seen in Fig. 3.

A semi-circle placed upon a circle is the form of the letter *ma* in the Mauryan Brāhmī. In pre-Kushāṇa period circle developed into a broad triangle. Kushāṇa inscriptions represent a transitional phase from the viewpoint of the development (Fig. 3) in which, finally, it takes a shape, termed as tailed variety. The left projecting part is thickened and base is slanted in the Maukhari's inscriptions.

Semi–Vowels

The Mauryan *ya* has two basic forms: first formed by drawing a vertical line in the middle of a crescent, the second made by a double curve in the place of a single crescent. The crescentic base developed into a flat shape and the central stroke reduced with thickened top in pre-Kushāṇa Brāhmī. The Kushāṇa specimens are also of flat-bottom type; but its left limb shows gradual evolution which may be noticed in Fig. 3. The left half of the letter is curved and right one is slanted in post-Gupta writing.

The Mauryan *ra* is a wavy vertical line. In Kshatrapa and Kushāṇa Brāhmī, it developed into a form which has a thickened top vertical line with its lower tip turned to the left, or occasionally to the right. The top of the letter became triangular in the Gupta period; and the post-Gupta inscriptions show the development of a triangular foot-mark.

Left facing hook with a horizontal bar is the shape of the Mauryan *la*. The base of the letter flattens in Kushāṇa period. From the viewpoint of the development Kushāṇa period is a transitional one (Fig. 3) showing two distinct forms of the letter, the hooked and the broadened left limb type. The first form of the letter is called eastern and second the western variety. Both forms of the letter are employed in the Gupta Brāhmī. Out of them, the western variety paved the way for the Kuṭila, or Nāgarī character.

The Mauryan *va* is represented as an upright stroke upon a circle. The circle develops into a triangle, and vertical is reduced which sometimes takes the shape of triangular head-mark in the Kushāṇa period. In post-Gupta inscriptions, head-mark further reduces and base is slightly slanted.

Sibilants and Ha

The standard shape of the Mauryan palatal *śa* is like an arrow facing upwards with its prolonged middle bar. The angular top of the letter develops into a curve in pre-Kushāṇa period. In the Kushāṇa Brāhmī, evolution is rapid (Fig. 3), finally takes a form in which left limb has a triangular or line foot-mark and a horizontal line in the middle. The top curve of the letter became peculiar with a downward extending right limb in the Gupta period. In post-Gupta period, foot-mark became peculiar like that in letter *ga*.

The cerebral *sha* of the Mauryan Brāhmī is represented as two parallel curves, placed one upon the other. In pre-Kushāṇa period, left vertical is reduced with flattened and angularized base and middle curve developed into a horizontal stroke. The Gupta inscriptions reveal two varieties of this letter; the eastern is formed by a narrow oval with a head-mark at the left and a leftward angle at the right; and the second, the western type is represented as the letter *pa* with fully lengthened mid line. The bottom of the letter in post-Gupta inscriptions has a slight slope.

The Mauryan dental *sa* has an additional hook, pointing downwards, attached to the left in the shape of *pa*. The verticals of the letter are equalized in pre-Kushāṇa period. In the Kushāṇa period, the form of the letter progressed much and finally developed into a looped variety (Fig. 3). This variety is called eastern, while in the western region the older form persists with prominent head-mark. Both forms of the letter are represented in the Gupta inscriptions. The Aulikara inscriptions reveal a stroke in the place of loop at the left limb. Lower loop of the letter develops into a solid-triangular form in the inscriptions of the Maukharis.

The shape of the letter *ha* in the Mauryan Brāhmī is like *pa* with an additional tick on the right. The curves of the letter are angularized in pre-Kushāṇa period. The Kushāṇa period is a transitional one from the viewpoint of the development. The letter developed under two distinct varieties which can best be understood by the illustrations shown in Fig. 3. The first hooked *ha* is called eastern variety. Western inscriptions present a form of angular *ha* with downwards curling right tick. In post-Gupta period, head-mark becomes solid-triangle and right curve further extends.

Ligatures (Fig. 2b)

In all the developmental stages ligatures do not follow the rule of Sanskrit grammar in which the first letter loses its inherent *a* to combine with the second letter. Earlier ligatures are normally formed by placing consonants one upon the other in their natural order. For accommodating them in the limited space, in general, the lower letter is made more shorter and cursive. These factors are responsible for the development of some letter forms, such as bipartite type of subscript *ya*, cursive variety of *ñ*, etc.

Development in the medial signs (Fig. 2a)

In the formation of the medial signs, from the time of Aśoka, *ā* is attached to the right, *e* and *ai* left, *u* and *ū* in the lower portion of the letter. Medial *o* is a combination of the signs for *ā* and *e*. And *au* is not found in the Aśokan Brāhmī. In later inscriptions it is represented by adding a sign of *e* to the medial *o*.

The medial *ā* is denoted in the Mauryan Brāhmī by a horizontal stroke attached to the right, either at the top or in the middle according to the shape of the letter. In Kushāṇa period it has taken the shape of a slanting stroke. The inscriptions of the Guptas and the Aulikaras generally demonstrate a straight horizontal line with its tip turned downwards. From this shape modern Nāgarī form of the selfsame medial is derived. In the ornate style of post-Gupta period, this sign is represented by a flourished top-stroke.

The Mauryan medial *i* is indicated by adding an angular or cursive form to the right of the top or in the middle of the consonant. Optionally in pre-Kushāṇa; but commonly in Kushāṇa inscriptions, the curve extends up to the left portion of the head-mark. In the Gupta period, curve is further extended with a downward turn reaching below the head-mark. In the ornate style of post-Gupta period it grows into more than one flourished curve.

Long *ī* is denoted by doubling the sign of medial *ī* in Mauryan and pre-Kushāṇa inscriptions. The Kushāṇa counterpart developed into full cursive form. However, Gupta specimens show a distinct feature in which right curve is smaller while left limb extends into a rightwards stroke. In the ornate style, it has taken a shape of two or more flourishes to the right.

In the inscriptions of Maurya and pre-Kushāṇa period medial *u* is marked by a stroke at the bottom of the consonant, either in horizontal or downwards vertical form. From the time of the Kushāṇas curved form of this medial sign developed which subsequently prolonged and shows an almost modern Nāgarī feature adumbrated in post-Gupta inscriptions.

Medial *ū* is formed by adding an additional stroke to the shape of medial *u* in the Mauryan Brāhmī. In pre-Kushāṇa and Kushāṇa inscriptions, left stroke is horizontally slanted to meet with the right vertical stroke. In the Gupta period, it developed either into a leftward curve with a rightward horizontal stroke or leftward curve opened downwards. In post-

Gupta inscriptions, it is represented as a leftward extended curve with a small horizontal stroke to right.

In pre-Kushāṇa inscriptions, medial *ṛi* is represented as a slanted stroke to the left at the bottom. From the time of the Guptas it is indicated by a rightward hook to the lower limb of the consonant.

In the Mauryan and pre-Kushāṇa Brāhmī medial *e* is shaped as a horizontal stroke to the left at the top or middle of the letter. In the Kushāṇa period it developed into a slanted top-stroke form. In post-Gupta ornate style, flourishes with embellished thin and thick line are formed.

Two horizontal or one horizontal and other slanted stroke is the shape of medial *ai* in the Mauryan Brāhmī. From the time of the Kushāṇas slanted stroke type of formation on the top become the common form. In post-Gupta ornate style, either both or the right slant are flourished. In latter specimen, generally, left limb is a horizontal stroke with a tick at the tip.

Aśokan medial *o* is a combination of two strokes of medial *ā* and *e*. From the time of the Kshatrapas both strokes developed into slanting form in which one is to the left and other to the right. One, or both of the slants are decorated by thin and thick line in post-Gupta inscriptions.

The medial *au* is not employed in the inscriptions of Aśoka. From the time of the Kshatrapas it has been formed by adding an additional sign of *e* in the form of medial *o* and developed in the same process.

Features of Nāgarī

The Nāgarī undoubtedly is an evolution of Brāhmī, but a question may arise as to which developmental stage of Brāhmī be ascribed the name Nāgarī. Similarities of the shape may not be an adducible ground for this purpose, because the shape of the Nāgarī *ḍha* is as much similar to Aśokan Brāhmī as the forms of *i*, *ja*, *bha*, of the 13th century A.D. So, it is necessary to define the distinguishing features of Nāgarī which differ from those of the earlier developmental stages of Brāhmī. A tentative outline may be given as follows:

Head–line

The main characteristic of Nāgarī is the entire breadthed top-stroke or head-line while in earlier developmental stages it was in triangular or short-line form.

Straight vertical line

Nāgarī script shows the use of straight vertical line. But in precursor stages it was in crooked shape.

Simplification

Nāgarī prefers simple forms, while predecessor writings were represented by elaborately twisted and elongated shapes of the letters and medial signs.

Uniformity in Medial Sign

In Nāgarī one sign is used for one medial instead of earlier practice of giving more signs for simple and ornamental styles.

Halanta Sign

The *halanta* sign was represented by making the letter small, or placing a stroke above the letter in earlier inscriptions. However, a stroke below the letter was also used for a *halanta* sign which was later adopted in the Nāgarī.

Compendious Consonant in Ligatures

Nāgarī ligatures are formed by mutilating the first consonant and conjuncting side by side, while in earlier developmental stages usually the complete shape was placed one upon the other.

Final Observations

The factors that were responsible for the development of the Brāhmī script are more or less the same that were responsible for the development of the Nāgarī script.

Economy of effort plays an important role in the evolution of the Brāhmī. The best example of saving labour can be seen in forming the letter *bha* of the Gupta period (cf., Fig. 1b), where the lower right and the upper vertical of the letter coalesce into a single vertical. The same tendency is responsible for the development of simplified forms which require the triangular head-mark to transform into a simple horizontal line and pave the way for the evolution of Nāgarī line-head-mark.

On the other hand, the desire for ornamentation also affects the course of development.[41] This works in three ways: first, box (cf., *ya* and *va* of Fig. 1b, D) and triangular (cf., Fig. 1, Table C and onwards) type of head-mark developed; second, embellishment in the shape of the letters (cf., *ya* of Kushāṇa period, Fig. 3); third, fondness for flourishes affecting medials to develop curly forms (cf., Fig. 2a, E & F). The tendency for ornamentation is also responsible for the development of the Kuṭila script.

Political changes also had a role in the development of the scripts. The formation of the bigger political powers are not favourable for the growth of regional cultures. The larger kingdoms try to adopt a uniform style of writing within their dominions. Consequently the script primarily becomes the subject of the kings, their officers, and royal scribes only; which arrests the independent evolution in farther regions. The uniformity in Aśokan Brāhmī throughout the subcontinent is mainly due to the centralized political power.

Disintegration of a political power — while in many ways disastrous, helps in the development of regional scripts. With the disappearance of an imperial authority small monarchies spring up and regional cultures evolve. Regional cultural centres emerge and the popular regional styles flourish. The popularity of writing demands swiftness, leading to the introduction of an additional quality, i.e., facile writing. Regular writing practices also create certain traits that are responsible for script developments. It required continuous and unobstructed movement of the pen, which in turn becomes responsible for the substitution of curves in place of angles & c. It is easier to draw a curved form which can be quickly written than to work out an angular form in which the movement of the hand is obstructed at several points. The influence of cursive hand is responsible for the development of several letter forms and medial signs. For example, the increasing popularity of writing in the Kushāṇa period[42] gave a fillip to the fast evolution in the letter forms (cf., Fig. 3) and medial signs (cf., Fig. 2a, Table C).

One of the other consequences of the popularity and intensity of writing was that more and more writers came forward and made their contributions to the development of Brāhmī script. The old '*āchārya* writers' must have had a number of disciple-apprentices learning the art of writing. Some of these writers, in their turn, formed their own schools which were responsible for the development of regional varieties.[43] Out of them a distinction is marked in the style of East and West in Northern India from the Kushāṇa period onwards (cf., Fig. la–b; Tables C & D, a–b). Hoernle[44] noted sibilant *sha* as the test letter to distinguish between the eastern and western varieties of the so-called Gupta Brāhmī. G. Bühler[45] adds two more letters *la* and *ha* to this list. He observes that, "in the eastern variety the left limb of *la* is turned sharply downwards, the base stroke of *sha* is made round and attached as loop to the slanting central bar, and the base stroke of *ha* is suppressed with its hook attached to the vertical sharply turned to the left. In the western variety these three have the older and fuller form."[46] R.D. Banerji[47] adds a fourth test letter *sà* of which the looped form is of eastern variety. But at the same time the distinctions between the eastern and western varieties are based on a few letters and are overlapped in geographical distribution.

Disintegration of the Mauryan empire encouraged foreign invasions and establishment of new kingdoms. When neighbouring indigenous states came in contact with them, among other things, writing also was affected. For example, we can point to the tendency of approximate equalization of length and breadth of the letters and angularization of the curves in the 1st century A.D. Dani observes: "the angular feature was, no doubt, dictated by the Greek lettering as well as by the technique of die-cutting."[48] Verma believes that the most significant and revolutionary change on Brāhmī was introduced by the Śakas of Mathurā.[49]

By nature, the writing activities are more intense and as a consequence more advanced in the centres of power than remoter areas. With the transference of the political and cultural gravity advances in writing travelled from one place to the other. For example, cultural gravitation was centralized earlier in Magadha in the East which after the disintegration of the Mauryan empire, in the post-Śuṅga period, shifted to Mathurā in the West. Hence, it became more advanced and predominant in the realm of writing in subsequent centuries. With the weakening of the Kushāṇa power and the rise of the Maghas of Kauśāmbī in the last phase of 3rd century A.D., the writing style of that region follows a more developed variety. In the 4th century A.D., the Guptas adopted and encouraged the script of Kauśāmbī region, which was nearer to their original home. But 'in the beginning of the 6th century A.D. the Maukharis of Mālava ruled over Magadha and Kānyakubja and with them they brought the script of the Mālava region,'[50] which eventually gained full currency.

The actual form of the letter is dependent on the writer's method of producing the letters on a given surface. Kasiā copper-plate[51] reveals 12 black ink written unengraved and only one engraved line. This makes clear the two stages of copper-plate making, writing and engraving. In several cases, the writing was done by a professional scribe of the court and engraved by someone else. However, sometimes the engravers themselves wrote the text on the surface or engraved the text without previously drawing the letters on them.[52] It is generally held that a writer was a literate man while an engraver was illiterate. Naturally the skilled hand of the professional writer made the script standard and uniform than the illiterate or semi-literate hand of the engraver. Occasionally, the movement of the engraver's instrument also made some differences in the representation of the forms of the letter. Bühler's observation is accurate in that "the degree of regularity with which the signs are used, depends not upon the age of the Śāsanas, but on individual qualities of the writers, their learning and their carefulness.[53]

Writing materials, too, affected the course of development of the Brāhmī script. For earlier period, we find stone and copper-plate as more popular base materials. As a result of several destructive agencies, including both man and nature, we do not possess manuscripts of more early periods. But from the Kurud Plates of Narendra (6th Cent. A.D.),[54] and Tiruvālaṅgāḍu Inscription[55] it has become clear that some of the royal charters were first written on palm-leaf or birch-bark and then were copied to more permanent materials, mainly stone or metal. Obviously, it is easier to write in cursive form on the raw materials while in engraving angular shape of letters with chisel on the stone drawing is easier. Scratching the letters on the stone is difficult, but when it was done straight line was transformed into curved.[56] Verma observes, in connection with the Piprahvā Vase inscription that "the device of scratching on a spherical object tended to make the letters long and slanting."[57] The small space on the coins compelled the writers to form the shape of the letters to suit the available space. As a result, the length of the letters was reduced and the medial signs were simplified on most of the coins.

Writing tools also effect the course of development. The uniform thickness of the body of the letters in the inscriptions of Aśoka is only due to the simplest writing tool, a rod-like object. From the first century A.D., thickness of the lines varied in the different part of the letter. Dani[58] and Verma[59] ascribe this feature to the edged reed pen. Practice with this new pen and skilful twisting subsequently developed several forms of the letters. For example, swift handling of the pen made letters more cursive. Dani[60] reconstructs eight types of head-marks which are the outcome of the different styles of handling the pen. The peculiar twisting of the pen made thin and thick lines in the flourished medial signs and letter forms. And it is the distinctive type of twisting the pen which is mainly responsible for the development of the Kuṭila script. The writing material in the South, i.e., the stylus and the palm-leaves, was the cause of developing more rounded and wavy characters in numerous South Indian inscriptions.

Dani is right in his observation that the use of the pen in the North was mainly responsible for the new shapes which so fundamentally differed from the southern characters.[61]

The technique of writing also affected the script. In North India, the general practice of the writing differed from the South. Writing on the leaves was done by pen and ink in North India, while in the South, the letters were incised on the leaves with a sharp-pointed needle like instrument and were made black by besmearing ink on the writing.[62] The technique of writing is mainly responsible for the development of more cursive forms in Orissa region. Because of the stylus with which it was written on talipot palm-leaves, it split the leaves if the lines were straight. In the same way the writing technique on copper-plate of the North and the Deccan is different.[63] Presumably, the technique of Deccan is responsible for the evolution of the line form of head-mark and simplified forms of the letters; because it is difficult to incise a solid triangle, or thin and thick line with a sharp stylus.

Geographical factors also have their share in the development of the script. For clarifying this point, we may take the example of Mālava region. The peculiar geographical position of Mālava has inevitably moulded all aspects of her culture complex. Situated on the border land between the North and the Deccan, it was open to influences from both sides. Here the two cultural traits often came in contact with each other and this phenomenon is mirrored in the styles of writing. For example, in considering the palaeography of Eraṇ inscription of Budha Gupta (A.D. 484),[64] Eraṇ inscription of Toramāṇa,[65] Gwālior inscription of Mihirakula,[66] Rinasthal inscription of Prakāśadharmā,[67] Mandasor inscriptions of Yaśodharmā;[68] we find that out of the cultural contacts the area produced a style of its own writing. Dani has given it the name 'the Malwa or Rajasthani style of writing'.[69] The same style of writing prepared the ground for the growth of Nāgarī script. The influence from Mālava on the one hand reached the northern parts of the country and on the other, it penetrated into the Deccan, by currents and cross currents of political-cum-religious factors.

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    "*Māhārashṭṛī tathāvantī Śaurasenyardhamlāgadhī*
    Vāhlīkī Māgadhī chaiva *shaḍetā* (another reading *ashṭetā*) *Dakshiṇātyajāḥ* ||
    Brāchaṇḍo Lāṭavaidarbhāvupanāgaranāgarau |
    Vārvarāvantya-Pāñchāla-Ṭākka- Mālava-Kaikayāḥ ||
    Gauḍoḍra-Daiva-Pāñchātya-Pāṇḍya-Kauntala-Saiṁ halāḥ |
    Kāliṅga-Prāchya-Kārṇāṭa-Kāñchya-Drāviḍa-Gaurjarāḥ ||
    Ābhīro Madhyadeśīyaḥ Sūkshmabhedavyavasthitāḥ ||
    Saptaviṁśatyapabhraṁśa vaiḍālādiprbhedataḥ ||.

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    "***Haṁsalivī Bhūyalivī Jakkhī tah Rakkhasī*** ya ***Bodhavvā*** |
    Uḍḍī Javaṇi Turukkī Kīrī Daviḍīya ya Siṁdhavīya ||

Mālaviṇī Naḍi Nāgarī Lāḍalivī Pārasī ya Bodhavvā |
Taha Animittī ya *livī Chāṇakkī Mūladevī ya* ||”

22. *Malayagirīyā Nandivṛitti*, p., 188 —
'*Tatra Nāgariṁ Lipimadhikṛitya kiṁchit pradarśyate*'
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49. *The Palaeography.*, p., 82.
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7. Sarnath pillar inscription, *Ibid.*, pp. 161–64, Pl. f. p., 162.
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a. Eastern style

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3. Mathura inscription of Huvishka: year 33, T. Bloch, *Ibid.*, VIII, pp. 181-182, Pl. f. p., 182

b. Western style

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a. Eastern style

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b. Western style

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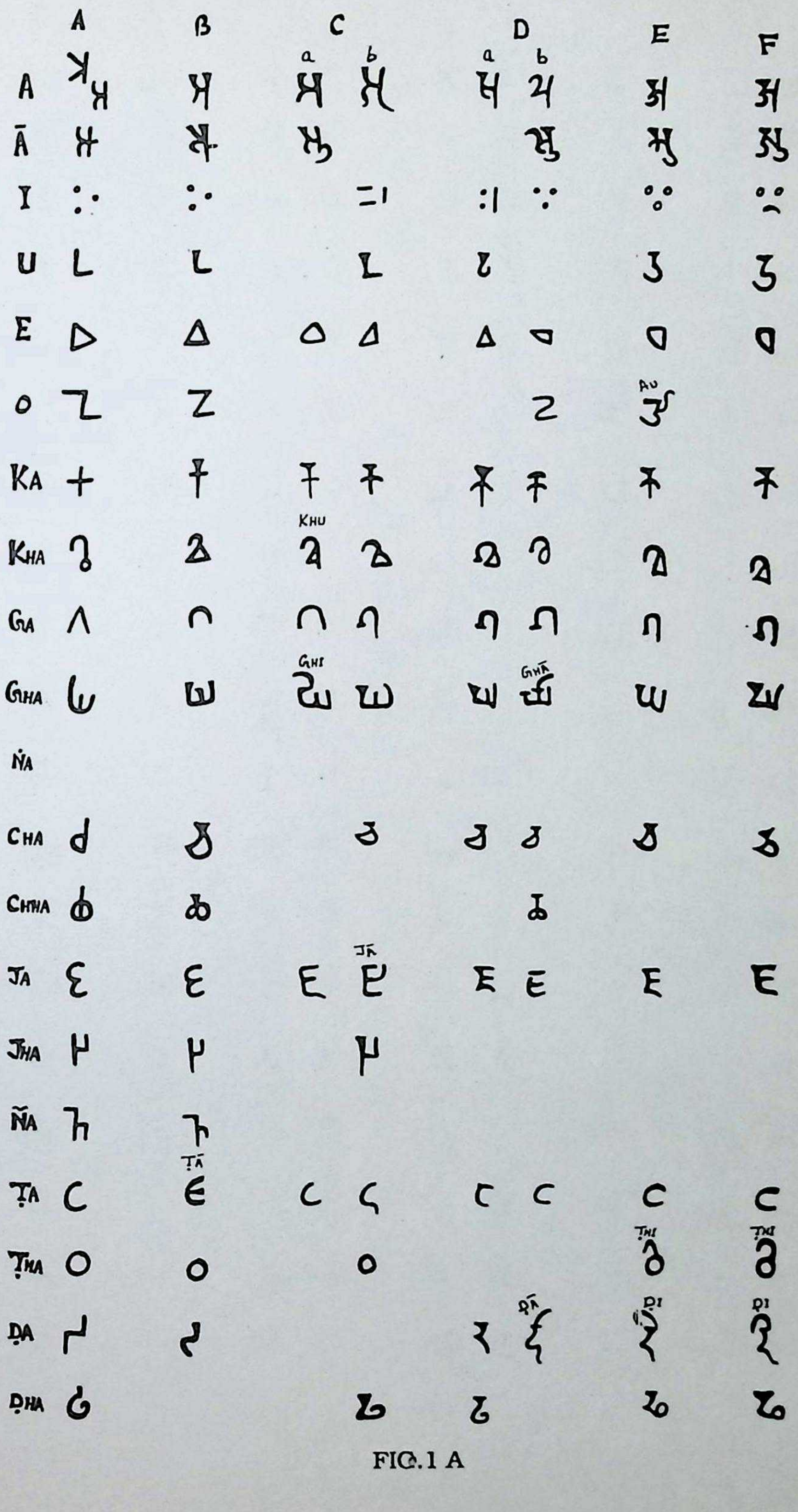
EVOLUTION IN LETTERS


A
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C
a
b
D
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b
E
F
A
Ā
I
U
E
O
AU
KA
KHU
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GA
GHI
GHĀ
GHA
ṄA
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CHHA
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ḌĀ
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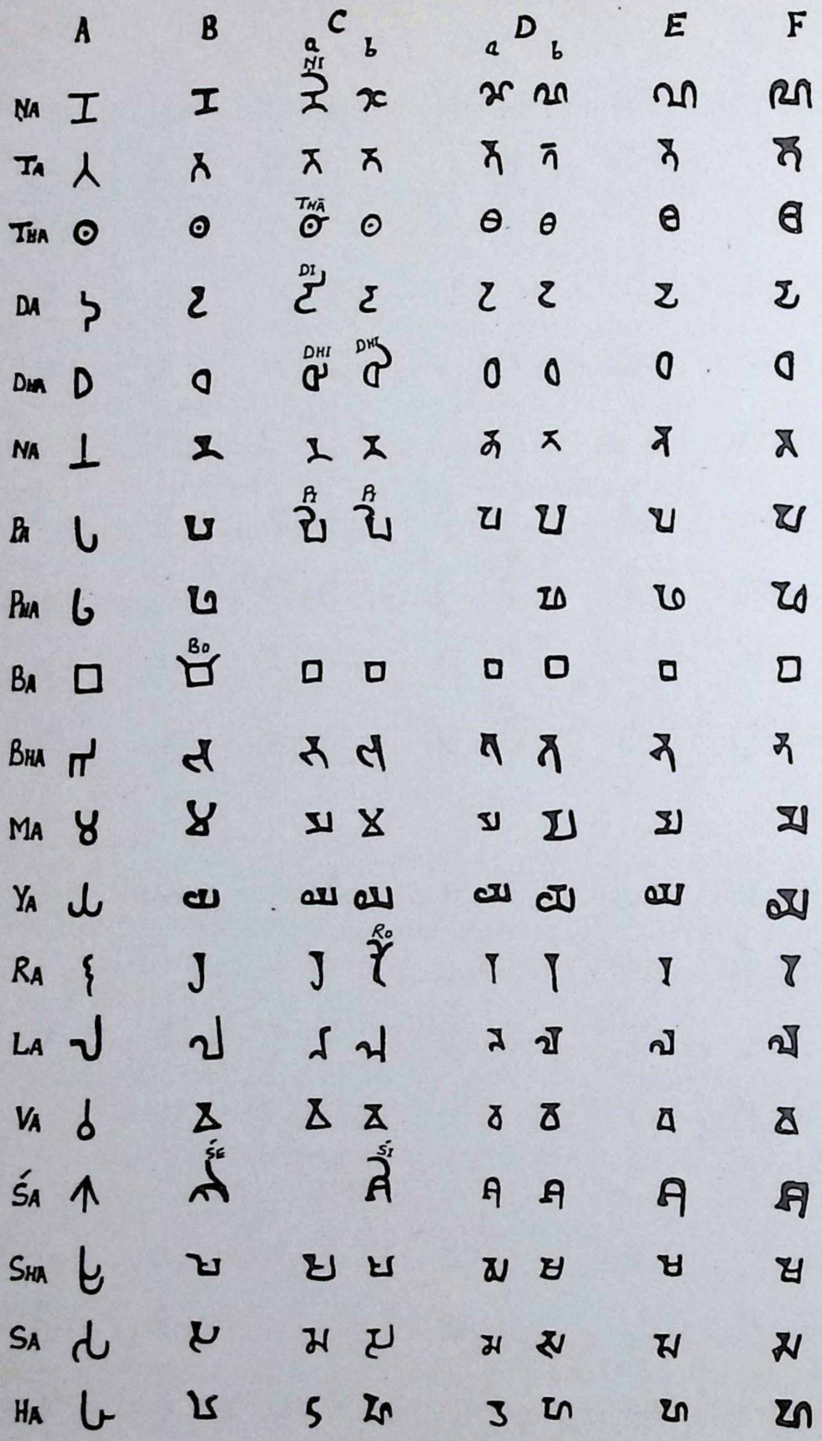
ḌA
ḌHA

FIG.1 A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F
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DHI
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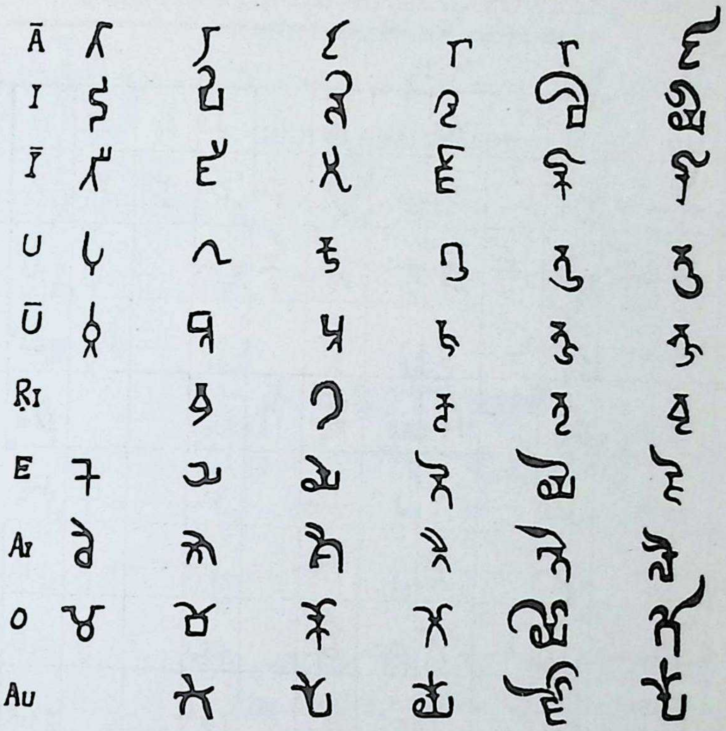
FIG. 1 B

A. EVOLUTION IN MEDIAL VOWELS


Ā
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ṚI
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AI
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AU

B. LIGATURES

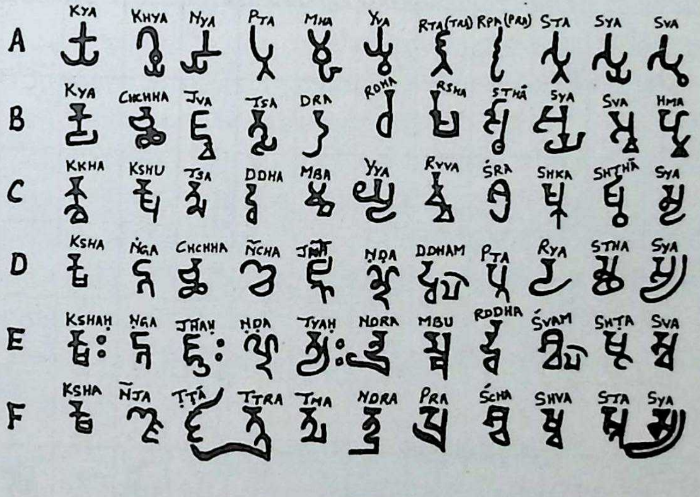

A
KYA KHYA NYA PTA MHA YYA RTA(TRA) RPA(PRA) STA SYA SVA
B
KYA CHCHHA JVA TSA DRA RDHA RSHA STHĀ SYA SVA HMA
C
KKHA KSHU TSA DDHA MBA YYA RVVA ŚRA SHKA SHṬHĀ SYA
D
KSHA ṄGA CHCHHA ÑCHA JHĀ ṆḌA DDHAM PTA RYA STHA SYA
E
KSHAḤ ṄGA JHAḤ ṆḌA TYAḤ NDRA MBU RDDHA ŚVAM SHṬA SVA
F
KSHA ÑJA ṬṬĀ TTRA TMA NDRA PRA ŚCHA SHVA STA SYA

FIG.2

Fig. 2

RAPID EVOLUTION IN SOME LETTERS

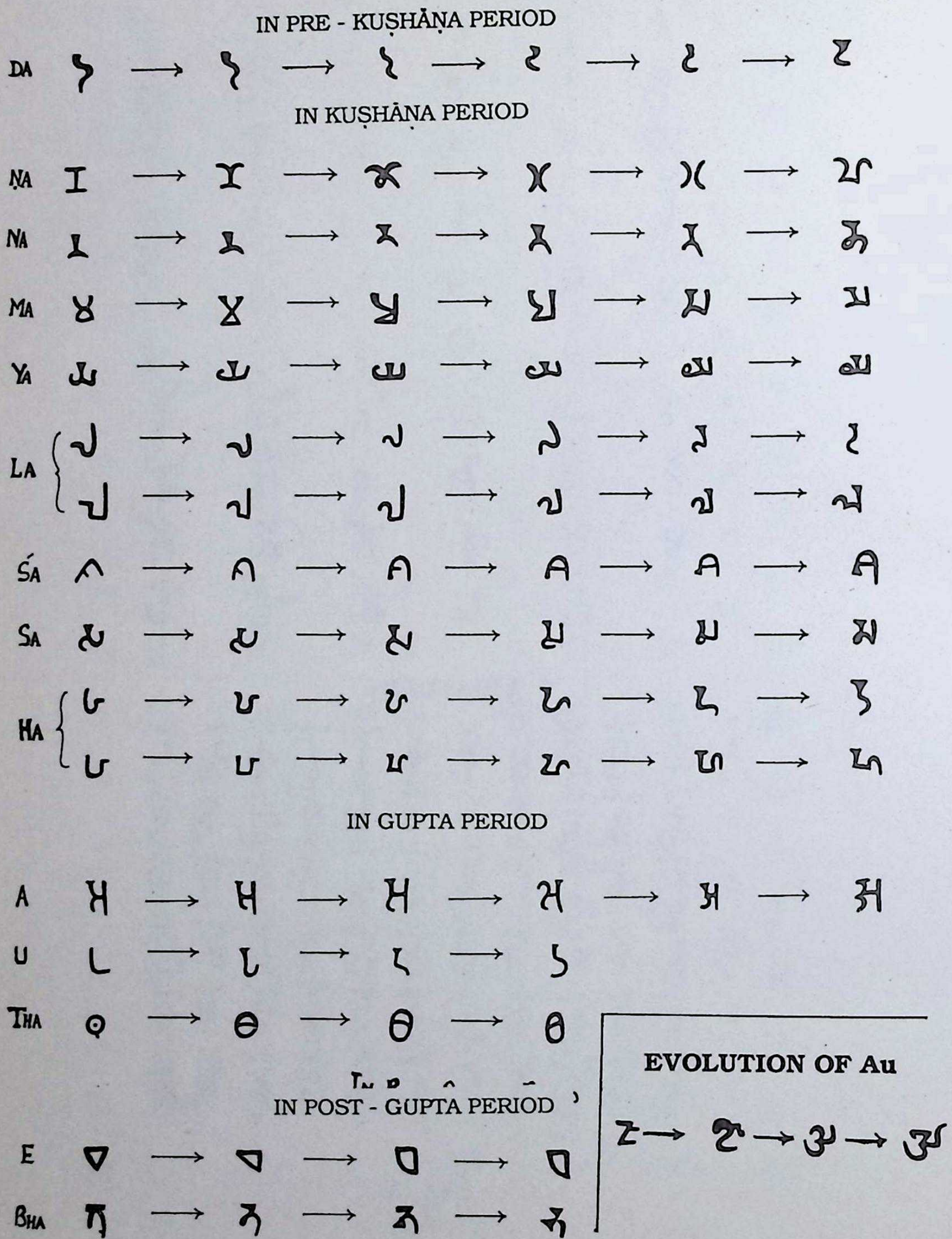

IN PRE - KUṢHĀṆA PERIOD
DA
IN KUṢHĀṆA PERIOD
ṆA
NA
MA
YA
LA
ŚA
SA
HA
IN GUPTA PERIOD
A
U
THA
IN POST - GUPTA PERIOD
E
BHA
EVOLUTION OF Au

FIG. 3

2

The Background (6th–8th Century A.D.)

Passing through its developmental stages, in North India, Brāhmī grew into a script called by the palaeographers as–Siddhamātṛikā,[1] Kuṭila,[2] acute-angled,[3] etc. The new innovation, by which it differs from Brāhmī, is the inward bending in the right vertical limbs of the letters. The bending of the vertical shows an acute-angle with the base line. Apart from these, in general, the top of the letters are triangular in shape and the medial signs are prolonged with twists and bends. These are mainly due to the pen-technique which can be seen in the forms of the letters (Fig. 4), which become much more decorative in the medial signs (Fig. 5). The distinctive feature of this newly developed Kuṭila script, according to Bühler[4] as well as Dani[5] are first noticed in the Bodh-Gayā inscription of Mahānāma (A.D. 588–89) and later on became the characteristics of the North Indian scripts. In due course of time all scripts of North India, i.e. Nāgarī, Assamese, Bengālī, Oriyā, etc., have developed from this very script.

The demarcation of geographical boundaries of the Kuṭila script may be assigned on the basis of its use from Gilgit[6] in the North to Tiwarakheḍ[7]

EVOLUTION BY THE PEN TECHNIQUE

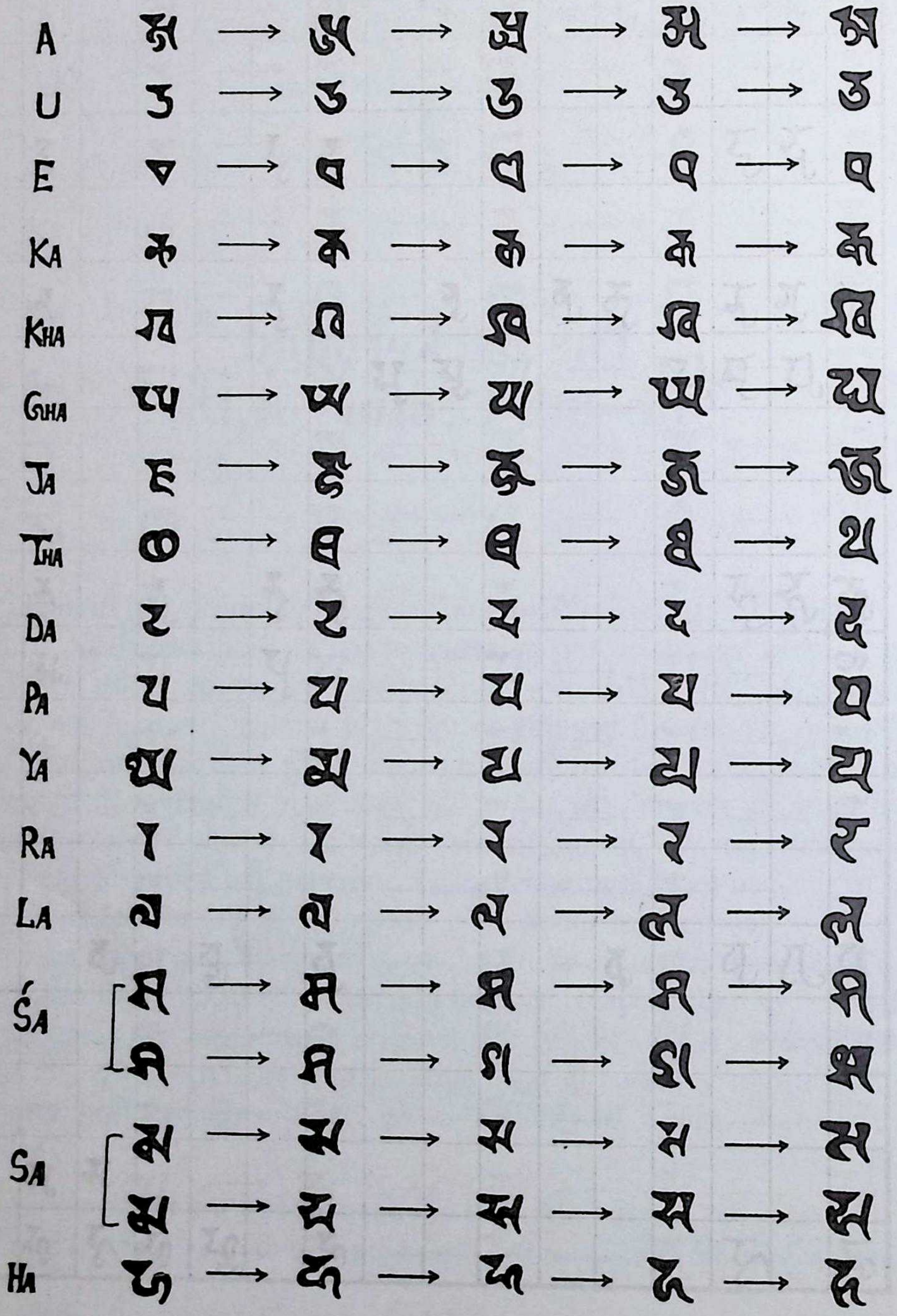
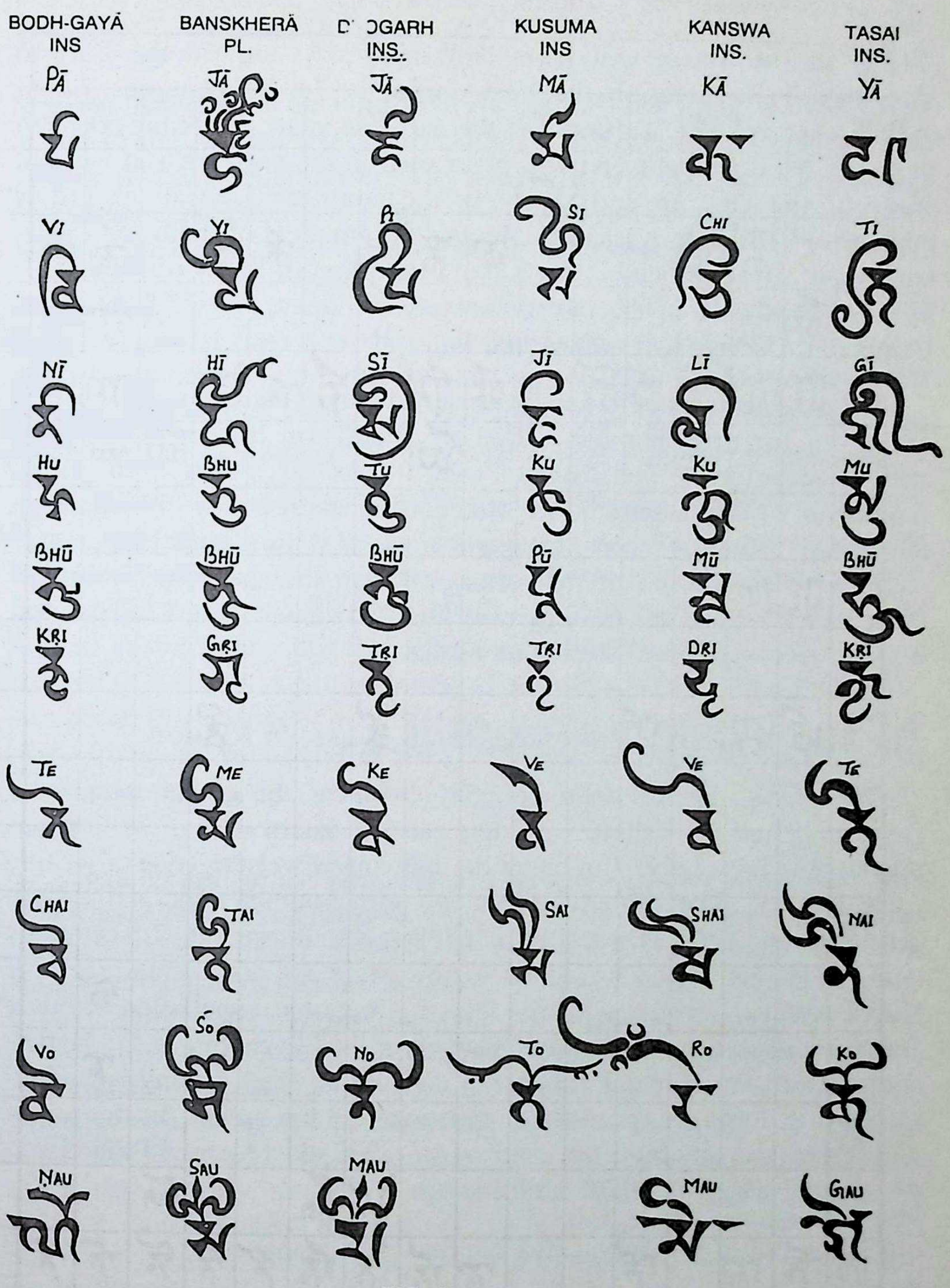

A
U
E
KA
KHA
GHA
JA
THA
DA
PA
YA
RA
LA
ŚA
SA
HA

FIG. 4

ORNAMENTATION IN THE MEDIAL SIGNS


BODH-GAYÁ INS
BANSKHERĀ PL.
DEOGARH INS.
KUSUMA INS
KANSWA INS.
TASAI INS.
PĀ
JĀ
JĀ
MĀ
KĀ
YĀ
VI
YI
PI
SI
CHI
TI
NĪ
HĪ
SĪ
JĪ
LĪ
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HU
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KU
MU
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BHŪ
KṚI
GṚI
TṚI
TṚI
DṚI
KṚI
TE
ME
KE
VE
VE
TE
CHAI
TAI
SAI
SHAI
NAI
VO
ŚO
NO
TO
RO
KO
ṆAU
SAU
MAU
MAU
GAU

FIG. 5

(M.P.) in the South and from Nidhānpur[8] (Assam) in the East to Vasantgaḍh[9] (Rajasthan) in the West, during the 7th–8th centuries. About the 8th century A.D. it drove out the early popular scripts prevalent in M.P. and Western India and was often used in the northern and western areas of the Deccan and rarely in the southern Deccan as far as Paṭṭadakal[10] (Bijāpur, Karnatak). Beyond the frontiers of India and Pakistan its use can be noticed in the Kābul inscription of Shāhī Khiṅgāla.[11] It has also been used in the inscriptions of Sri Lanka, Nepal, Tibet, Java, Cambodia, Central Asia, China and Japan.[12]

The main features of this script remained almost the same in this period excepting for ornamentation. The ornamentation differs in different regions according to the materials used for writing. Aside from the influence of writing materials, we also noticed the regional influences on the writing. Not only writing materials or regional traits, but also personal habits and mannerisms of the scribes affected the shapes of letters. In order to understand the development and variations of the Kuṭila script, it is grouped here under four main heads:

The Middle Gaṅgā Valley & North Western Region

The middle Gaṅgā Valley properly includes the greater portion of Bihar and Uttar Pradesh. In the Gupta period, eastern style of writing was prevalent in this region. But under the Maukharis western style of writing came into use. The western style along with Mathurā style and eastern ornamentation underwent a change in this region during 6th–7th centuries A.D. This interaction produced a new style — ornamental style of Kuṭila script — which was also given a regional appellation 'Middle Ganges Valley script'.[13] In the beginning of the 7th century A.D., Harsha adopted the ornamental Kuṭila script and this style of writing spread all over North India along with the expansion of his power. In the north-western region, about the 8th century A.D., a distinct form of Brāhmī was developing which is called Śāradā script.

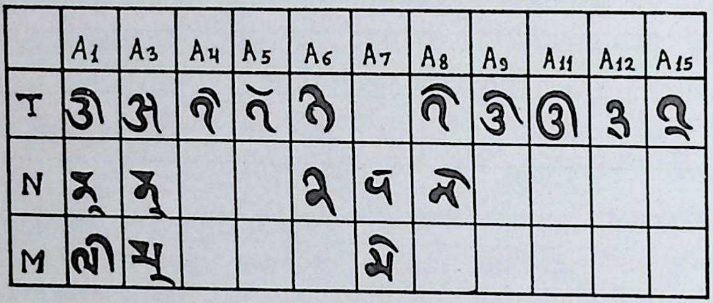
The script of the Bodh-Gayā inscription of Mahānāma (A.D. 588–89) is a step further from the writing of Aulikaras (Mandasor) and Maukharis (Bihar & U.P.). In this epigraph (Plates 1–24, Table A_1) only three initial vowels, *ā*, *u* and *e* are noticed. The right vertical of the initial *ā* is slanted and forms an acute-angled shape. The downward curve of *u* is extended further; and *e* is of flat-topped variety with right-angle.

The letter *ka* is generally in the new form in which left curve developed into a triangular loop and right one into a downward tick. But the old curved form is retained in *ku*, *kṛi* and ligatures. The top of the *kha* is flat and left limb shows a triangular foot-mark. The right vertical line of *ga* has a bend in its middle. The letter *ṭa* is of flat-topped variety in letter *ṭi*. *Ṇa* is of open-mouthed variety with sloped base and extended outer curves. Right limb of *ta* is curved. In *tha* and *dha*, the left curve slopes in a fashion that upper portion became broader and the lower narrower. *Da* is represented by double curve, with its tip turned up. *Na* shows Kuṭila feature in the right vertical. *Ya* is of the tripartite variety with left arm merged in the loop. Bipartite variety of *ya* with a bend in the right vertical can be seen in the letter *ye* (Plate 16, Table A_1). Letters *bha*, *ra* and *sa* show triangular foot-mark or loop. The base of the letters *pa, pha, ma, ya, la, sha* and *sa* is sloped and their bent right vertical makes an acute-angle.

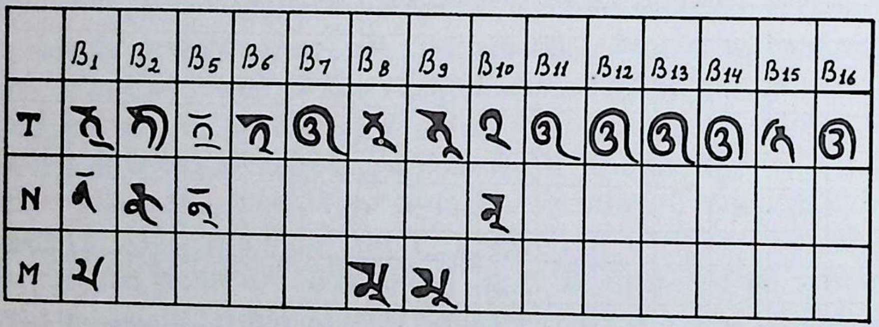
Ligatures follow the earlier style in which the letter pronounced first is written in full form in the same line while the following letter is engraved just below the former. Following the tendency of simplification, in some instances, the first or optionally the second letter is shortened and becomes cursive. Forms of two armed superscribed *ṅ* , cursive subscribed *ña* and reduced form of *ya* and *ra* are noteworthy. In *rya*, superscribed *r* directly joins with the bipartite form of *ya*. The right vertical of the subscript is extended upward to the head-mark. It can be seen in *mpo*, *sya* and *ssa* (Plate 24, Table A_1). The ornamentation is noticed in the medial signs. In the fifth century, flourishes in the medial signs are clearly seen in the Bilasad[14] and Meharauli inscription.[15] The ornamentation attained maturity in the period of Aulikaras and Maukharis, which is evident from their inscriptions (cf. Fig. 2a, Tables E & F). In the present inscription (of

HALANTA SIGNS

IN 6TH - 8TH CENTRUY A.D.


A1
A3
A4
A5
A6
A7
A8
A9
A11
A12
A15
T
N
M

IN 9TH CENTURY A.D.


B1
B2
B5
B6
B7
B8
B9
B10
B11
B12
B13
B14
B15
B16
T
N
M

IN 10TH CENTURY A.D

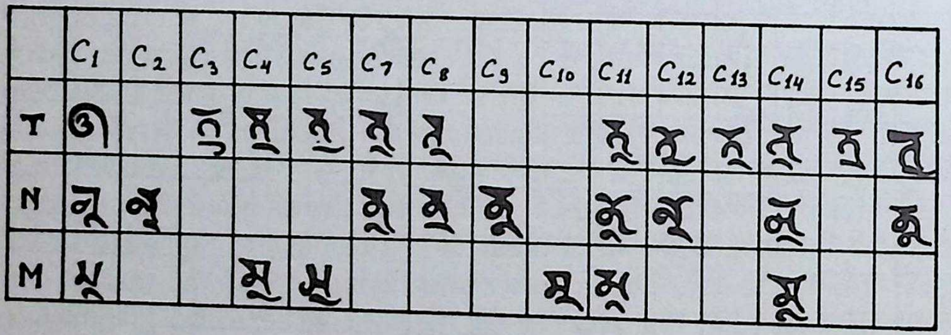

C1
C2
C3
C4
C5
C7
C8
C9
C10
C11
C12
C13
C14
C15
C16
T
N
M

FIG. 6

Mahānāma) the effect of the pen style is marked, not only in the thick and thin lines but also in the long flourishes. Generally, in the formation of medial *ā*, a wedge is added at the headmark to the right. But in *pā*, a curve is added to the top of the letter. A different mode, of slightly bending the right end and extending it upwards beyond the top of the letter to the left, is adopted in the formation of *ṇā*. For medial *u*, the right vertical of the letter extended downward as in *pu*, *mu* and *su* (Plate 10, Table A_1). Sometimes, a curve is added to the left at the right end of the letter as in *ku, gu, tu* (Plate 9, Table A_1). The medial *ū* is formed by adding an additional stroke either to the left or right in medial *u*. The medial *ṛi* is represented by adding a hook to the vertical of the letter. The twisted form of medial *e*, which first appeared in Susuniā Rock inscription of Chandravarmā[16] (4th Century A.D.) now became common. Occasionally, it is also formed by a wedged shape at the left of the head-mark. The top slants of the medials *e, ai, o* and *au* are flourished, or simple as in *ṇau* (Fig. 5). The *anusvāra* is represented by a dot on the top of the letter, such as in *lyaṁ* (Plate 24, Table A_1). The *visarga* is formed by placing two dots one upon the other, to the right of the letter, such as shown in *ṇṇāḥ* (Plate 23, Table A_1).

It becomes clear that the inscription of Mahānāma does not represent the fully developed form of the Kuṭila letters; and the fact is evident that the Kuṭila script was in the initial stages of development. During the 7th century A.D. the Kuṭila features further progressed, clearly understood by the illustrations shown in Plates 1–26, Tables A_2, A_4 & A_5. These illustrations have been taken from the Later-Gupta inscriptions (Aphsad; Śāhapur, A.D. 672; & Deo Baṃārk) of Magadha region and Bānskherā (A.D. 628) and Madhuban (A.D. 631) copper-plates (both of U.P. region) of Harsha. Of these, Bānskherā Plate is more ornamental and shows artistic calligraphy of the seventh century A.D. The letters of the sign-manual in Bānskherā Plate are so elaborately ornamented and beautifully incised that Bühler remarks, "If king Harsha really used these characters in signing all legal documents, he must have been a most accomplished penman and the cares of government and the conquest of India must have left him a great deal of leisure."[17] But it is known from various sources that perhaps Harsha was a good poet too. If so, his appreciation of penmanship might have led him to calligraphic writing.

The lower limb of the right verticals in Aphsad inscription are more twisted, on the basis of which Fleet calls it "the Kuṭila variety of the Magadha alphabet of the seventh century A.D."[18] Banerji[19] noticed eastern influence in it. Aphsad inscription was done by Sukshmaśiva, a native of the Gauḍa country.[20] So, it is possible that the eastern influences arrive with the writer. But after all, there seems no remarkable difference from the script of the region.

The feature of development is seen in the bending of the right verticals. In initial vowels, the lower bend of *a* and *u* is prolonged into an artistic curve. A notch is marked at the top line in initial *e* of Bānskherā Plate; and *u* of Madhuban Plate. Initial *i* is formed by two dots above and a curve below. Rare, initial *i* in Bānskherā Plate is formed by a dot in either sides of a wedged and footmarked vertical line.

Among consonants, the evolution is noticeable in the form of *ka*, where vertical line prolongs and right vertical lengthens into a bent vertical. The foot-mark of the letter *ga* is triangular; in the case of rounded-top, the right limb of the letter extends upward. The letter *ja* of Bānskherā Plate shows a developed feature with a head mark on the top, middle bar bent downwards and lower portion going further down and bent to the left. *Ṭa* in Later-Gupta inscriptions is merely a curve with horizontally placed wedge at upper end. Banerji[21] asserted to this form as eastern and opines that eastern variety differs very much from that of the head-marked western. But this is unreliable, because curved form is a common variety of the earlier period and also employed during 7th–8th centuries A.D. in Rajasthan and western regions (Cf., Plate 1). Presumably, cursive form was the common variety from which head-mark form of western and double curve form of eastern varieties ultimately evolved.

Among other consonants, right curve of *ṇa* is elongated with curl, upper portion of *tha* shows an inner loop. Later Gupta *da* represents a tail in the place of lower tick; and right portion of *na* growing into a vertical form. The triangular foot-mark of *bha* becomes peculiar and right limb is extended. *Ya* is of developed bipartite type. The left portion of *va* growing into a round form. With flat or round-topped *śa*, a looped variety of the letter is also found. In Madhuban Plate, solid triangular loop of *sa* shows a process of developing the tail. Occasionally triangular foot-mark of *sa* in Later-Gupta inscriptions is hollow or open its mouth. *Ha* prolongs its right limb in a curly fashion.

Ligatures represent more cursive form of some letters, such as subscript *ña*, superscript *ṅ* and above all cursive form of *ṇ* (Plate 23, Table A_2). This form of *ṇ* shows the precursor stage of modern shape. Subscript *va* became triangular to differentiate it from *dha*.

The medial signs are simple as well as of ornamental types. In Bānskherā Plate, generally, top-stroke forms of medial signs occur which are formed by two, or more curved shapes. In the sign-manual, medial *i* contains more than a dozen strokes and medial *ā* has seven. In simple style, curve of medials *i* and *ē* are fully extended and occasionally, turns outwards in Later-Gupta inscriptions.

The development of the Kuṭila script, in 8th century A.D., shown in Plates 1–24, Table A_3; is taken from Nālandā Stone inscription of Yaśovarmā of Kannauja. Incidentally, it is difficult to agree with the view of Hirananda Sastri that this inscription "cannot be placed later than the first half of the sixth century A.D."[22] The inscription shows advanced forms of letters, developed tails and broader head-mark. These palaeographic characteristics demonstrate that it cannot arguably be put before the eighth century A.D.

An evolution is noticeable in the development of tails seen in *a, i, e, ka, kha, cha, da, dha, ya, ra, la, va*. The top of the letter *tha* grows a peculiar inner loop. *Ma* is yet to develop its left loop, while in western India, from the sixth century A.D., looped form of *ma* was frequently employed.

According to Dani, "The medial vowels have become almost standardized, with the exception of *ā* and *o*, which still optionally retain the older forms.[23] But, cursive as well as vertical forms of *u*, two varieties of medial *ū*, full extended or short curve types of *i* and *ī* may be observed in the inscription (Table A_3).

On the whole, this inscription marks an advance towards the evolution of proto-Nāgarī. However, at the same time it prefers ornamentation and alphabets retain the Kuṭila features.

Eastern India

Bengal, Assam and Orissa together form the region of Eastern India. From the palaeographical viewpoint, the influence of the region reached as far West as Bihar and as far South as Andhra Pradesh. With the expansion of Harsha's political power the script of the Middle Gaṅgā Valley influenced the script of the eastern region; yet it retains its individuality. The style of Bengal does not have the foot-mark and the letters *bha* and *sa* do not have the solid triangular foot-mark. They show directly the open-mouthed triangle at this point.[24] The confusion of using the *va* for *ba* also is the contribution of Bengal.[25] The first appearance of twisting medial sign in this region makes probable that the region was the original seat of ornamentation from where it spread to the other parts and helped in the development of the Kuṭila script.

Purushottampur Plates of Sainyabhīta Mādhavavarmā II (*c.* A.D. 619–32) and Chaṇḍeśvara Plates of Mānabhīta Dharmarāja (*c.* A.D. 695–730) are selected and illustrated in Table A_{16}. Generally, the alphabet shows cursive features, which may be due to using stylus and imitation of palm-leaf writing.

Initial *ā* shows peculiar eastern features and lower tip of *u* turns downwards. *Gha* of *ghā* points towards Nāgarī shape. *Ṇa* is cursive as well as of open-mounted variety. The upper loop of *tha* in *thā* is detached from the vertical line. *Bha* and *sa* have opened their mouths. The base of *la* develops into a hook and both hooks show inner curl. The base of the letters *pa, ma, ya* and *sha* are sloped and their right verticals are sharply bent. In ligatures, subscript is reduced and lower *ṭa* of *ṭṭa* turns its mouth downward. Medial signs are like the other epigraphs of that period.

Nidhānpur grant of Bhāskaravarmā marks the expansion of the Kuṭila script in Assam region. The right vertical of the letters, such as *pa, ma, ya*, etc., show the Kuṭila features; and *bha* starts the process of mouth opening.[26]

Central India and Rajasthan

The eipgraphs pertaining to this section are scattered in a vast area and therefore differences in the writing styles are for certain encountered. The central territory for this vast area was Mālava which, owing to the cultural contacts both from North and South, evolved a new style of writing. Dani calls it "Malwa or Rajasthani style of writing."[27] This style covers the whole area, spread as far as western India and also influenced the script of the Gangetic and eastern regions. Later, in the seventh century A.D., ornamental characters of the Middle Gaṅgā Valley influenced the script of this region. At the same time, the writing style of this region maintained its individuality and produced more advanced letter forms in the last phase of the seventh century A.D., which paved the way for Nāgarī and is now called by the appellation proto-Nāgarī. In proto-Nāgarī, the triangular head-mark becomes broader, or is replaced by a small stroke; and tail, or footmark is developed at the bottom of the letters.

Vasantgaḍh inscription of Varmalāta of A.D. 625 (Table A_6) and Jhālrāpāṭaṇ inscription of Durgagaṇa of A.D. 689 (Table A_7) are selected for the study of palaeographical development with regional peculiarities. The influence of the Middle Gaṅgā Valley is here clearly marked. However, Vasantgaḍh inscription shows tendency to use some signs with a little ornamentation. Some of the letters such as *a* and *sa* still retain local forms. The initial *a* is of the curved type and *sa* maintains the local variety with the left hook. In the Vasantgaḍh inscription, *e* is of sloppy left limb type; *kha* without a foot-mark and *ṭa* has a flat top. Notched base type of rounded back *ḍha*, distinct separate sign for ba, archaic tripartite form of *ya*, etc., are also the noteworthy forms. Dani[28] refers to the closed loop in the letter *ma* whereas in the photographic reproduction of the inscription the loop is unclear.[29]

In Jhālrāpāṭaṇ *ṭa* developed into triangled-topped variety, *ṇa* took new shape, *ma* has a small loop, *ya* is of bipartite type and *ra* developed a tail at the foot. A variety of the archaic oval *tha* is found in this inscription. The conjunct *ṭṭa* is of peculiar variety in which full form of both letters is separately formed one upon the others, the lower one being smaller (Pl. 25, A_7).

Most of the medial signs in Jhālrāpāṭaṇ inscription are similar to the corresponding signs of the Bānskherā Plate. Optionally, the curve of medials *i* and *ī* extends up to the lower portion of the letter and bends towards left or right (Pls. 5–8, Tables A_6 & A_7). Sometimes, a kind of hook form is used for medial *ā* in Vasantgaḍh inscription (cf, Pls. 3–4, see *tā*, *mā*, *lā*, *śā*, *sā* and *hā*). Twisted *ā* medial is also noteworthy in *pā* (Pl. 4, A_6).

The further developments in the alphabet during eighth century A.D. are represented in Tables A_8, A_9 and A_{10}, taken from Tasāī and Khaṇḍelā inscriptions (Rajasthan), Indragaḍh inscription of Naṇṇappa, Saugor and Chhoṭi Deori inscriptions of Śaṅkaragaṇa I (all in M.P.). Of these, Khaṇḍelā inscription (A.D. 807) belongs to slightly later period in which different limbs of the letters are formed thick and thin in an artistic manner. It seems that originally the inscription was written by brush or some tool like that.

The head-mark of Śaṅkaragaṇa's inscriptions developed into linear form while in other inscriptions it is in a solid triangular form. The alphabet of the Indragaḍh inscription closely resembles that of the Jhālrāpāṭaṇ. But letters *ka, kha, ga, ja, tha, da, ya, la, va*, etc., of the present inscription are of a more developed variety. Initial *u* looks Nāgarī in form. Sometimes, the right curve of the letter *ka* is turned inside and inner curve of letter *kha* becomes rounded. The middle bar of the letter *ja* is prolonged with downwards bent. *Ṭa* shows a developed head-mark, *da* has a short tail and *sa* retains left hook.

In the Khaṇḍelā inscription, the development of a tail is discerned in the letters *ka, kha, gha, cha, ja, da, pa, ma, ya, ra, va, sha* and *sa.* The letter *ḍa* is interesting as it resembles the form of the letter in Jaina-Nāgarī.[30] *Ṇa* is like the Nāgarī *lā*. The shape of the letters *ka*, *ga*, *cha*, *ṭa*, *ḍha*, *da*, *na*, *pa*, *ma*, *ya*, *ra*, *la*, *va* and *sa* (Pls. 1–2, A_8) show the transitional phase and nearer to their corresponding forms in Nāgarī.

The further developments are noticed in the Śaṅkaragaṇa's inscriptions, in the forms of cursive *ṇa*, developed *ṭa*, open-mouthed *bha* and *sa*, looped *ma* and tailed *ra* (Pls. 1–4, A_{10}). However, *gha* is of archaic variety, *ja* retains three horizontal bars, *da* has a tip instead of tail and *na* is of looped variety. *Pa* is open at the top while two verticals of *va* meet with the line headmark at two points (Table A_{10}). V.V. Mirashi[31] is accurate in placing, on palaeographical grounds, these inscriptions in the middle of the eighth century A.D.

In ligatures, the forms of *ñcha*, *ñchha*, *pta*, *rya*, *hna*, etc., are noticeable. In the subscript *ṭa* mouth opens downward.

The medial signs of Tables A_8 and A_9 are, in general, ornamented while those of Table A_{10} bear simple forms. Table A_{10} represents mostly standardized form of medial signs in which *u* is of cursive variety; *e*, *ai*, *o* and *au* are reaching Nāgarī forms. Medial *ā* in *jā* is added to the middle bar of the letter. In *nā* and *hā* it is attached on the top in slanted forms and in ligature *ṭṭā* in hooked shape while usually it is found in a long or short vertical line form.

Western India and the Deccan

In this group I propose to describe the development of the Kuṭila script of south-western region of Madhya Pradesh, Gujarat and Maharashtra. The Kuṭila script represents marked evolution in this region. The most ancient specimen of proto-Nāgarī is found from Gujarat. However, the earlier inscriptions of the region are engraved in local (cave) characters. A question may arise, as to what led the scribes to use an alphabet different from that which was current in their own region. Vasu, after referring to the migration of Brāhmaṇas, pointed out: "Some of these immigrants who came from Magadha, Kānyakubja and Gauḍa, brought to their new colony their old alphabet, which in a later period became known as the Nāgarī-lipi."[32]

Most of the earlier proto-Nāgarī specimens of the region reveal the mixture of triangular and line forms of head-mark (cf. Table A_{13}). It seems probable that the immigrant Brāhmaṇas of Northern India, who had brought with them their own scripts, tried to engrave the alphabet in the same form. Naturally, it is hard to draw a solid-triangular shape with a stylus, the main writing tool of the region. The writing materials and writing technique of this region played an important role in the emergence of the simple form of the alphabet.

Table A_{11} is taken from the Tiwarakheḍ Plates of Rāshṭrakūṭa Nannarāja (A.D. 631) to represent the palaeographical development. The present inscription differs from the Indragaḍh inscription of Rāshṭrakūṭa Naṇṇappa in the sense that the Indragaḍh inscription reveals ornamental characters while Tiwarakheḍ Plates prefer only the simple forms. Triangled head-mark developed into short line. However, the alphabet retains Kuṭila influence. The right limb of the letters *a*, *ka*, *ga*, *gha*, *ta*, *na*, *pa* and *ya* bends inwards at the middle. The tails are not well marked, only a short tail is seen in the letters *gha*, *da*, *pa* and *va*. The tail of initial *i* is turned towards right. The curve of the letter *ka* is more elongated and sometimes looks like looped *na*. *Kha* in *khe* has an upward going stroke outside the right limb instead of an inward triangle (Pl. 15, A_{11}). Such a *kha* is again found in ligature *khyā* of Kalachuri inscriptions (Pl. 27, A_{10}). *Na* is of looped variety; and *ma* shows a hollow loop at the left limb. *Bha* and *sa* are of open-mouthed variety. *La* gracefully curls its left hook. The form of *va* is used for both, *ba* and *va*, in which upper protion of the left curve joins with the head-mark instead of the vertical line. In ligature *ṇḍa*, superscribed *ṇ* is of three tooth type. Subscript *tha* is of oval variety. Superscript *s* shows three forms, namely open-mouthed, tailed and hollow triangular. Medials are usual as in other regions.

In the signatures of the Gūrjjara princes on the Kairā Plates (A.D. 629 & 643),[33] Sāṅkheḍā Plate (A.D. 642),[34] Navasārī Plates (A.D. 709),[35] Añjanerī Plate (A.D. 710),[36] Kāvī Plate (A.D. 736),[37] and Prince of Wales museum Plates (A.D. 736)[38] genuine specimens of northern alphabet are found while the texts are in local characters. Presumably, these are the earlier examples which show the evolution of the line top-mark and tails. Bühler[39] recognized these characters of the sign-manuals as first example of Nāgarī. But they do not seem written in Nāgarī characters as they display the old form of the letters without full covering head-lines and vertical tails. The feature of Kuṭila is present even in the letter *ma* and *ya* of Kāvī Plate.

Table A_{13} is taken from Hiḷol Plates of Chandrāditya (A.D. 788). The inscription is written with the aid of stylus and represent hollow-triangular head-mark. Initial *ī* is formed by placing a dot on each side of double curved line. Letters *kha*, *da*, *pa* and *ya* have short tails. A peculiar variety of *tha* may be seen in *thi*, which is formed by two loops. Sometimes, *ka* looks like looped *na* and *na* is of many varieties. Ligatures are the same as before in that period. The noticeable form is the superscribed *b* of ligature *bda* (Pl. 30, A_{13}). In ligature *sthā*, subscript *tha* is of Aśokan type. Medials are standardized and have taken Ngarī forms, however, variations can also be seen in the forms of *ā*.

Tables A_{12}, A_{14} and A_{15} are taken from Multāī, Sāmangaḍh and Daultābād Plates (all of 8th Cent. A.D.) of Rāshṭrakūṭa rulers. These copper-plates display only the simplified style. However, there is a noticeable difference between them. Multāī Plates show the influence of Kuṭila writing and only short line form of head-mark. Sāmangaḍh copper-plates illustrate the simplified copper-plate style of Rajasthan.[40] The top-stroke of letters in this inscription covers the entire breadth. Generally, the head-mark of Daultābād Plates is in notched shape.

The lower portion of middle bar of initial *a* in Table A_{14} is turned up and *ā* has a slanting stroke from the middle of the vertical line of *a* instead of common lower curved shape. The tail of initial *i* is turned to left, which has a downward bend at the tip in Table A_{15}. Initial *ī* is denoted by turning the tail of *i* to right in Sāmangaḍh Plate. The initial *e* of Multāī Plates is of peculiar variety.

Remarkable evolution in the consonants are seen. The tails are small in Multāī Plates while other two inscriptions reveal a long tail in letters *ka*, *kha*, *cha*, *da*, *dha*, *pa*, *ma*, *ya*, *ra*, *la*, *va*, *sha* and *ha*. The head-mark of *ṭha* is yet to develop. Lower limb of *ḍa* shows a process of leftward bending. *Ṇa* of Table A_{12} is of open mouthed variety. Other two inscriptions show well developed form of cursive *ṇa*. *Ta* is still of curved variety. *Tha* of Table A_{14} shows transitional phase. *Na* of Table A_{15} is of vertical variety while in other inscriptions it retains broader looped feature. *Pha* has an inner loop. *Ba* in Multāī plate is denoted by a distinct sign. *Bha* and *sa* have their mouths open. *Ma* has a loop at the left angle. The left curve of *la* is prolonged. *Ha* of Table A_{14} shows a developed tail.

Ligatures are formed in the old pattern. Subscript prolongs its right vertical up to the head-mark. Subscribed *chha* of Table A_{14} shows a developing form of the letter. Superscript *r* is of developed variety. Both *va* of ligature *vvi*, in Daultābād Plate, are formed by placing one upon the other in the left portion of the vertical line.

The medial signs are of different types. Table A_{14} generally shows full perpendicular form of modern *ā* medial except in *ṭā* and *ṇā* where hooked or curved form is still present. A horizontal notch is optionally used for *ā* in Daultābād Plates. Both forms of medials *u*, *ū* and e are found.

According to Bühler, "The most ancient document, written throughout in Nāgarī, is the Sāmangarh grant of Rāshṭrakūṭa king Dantidurga of A.D. 754."[41] However, in scrutinizing the palaeography of this inscription, it is found that *ṭha* has no head-mark; *e* and *gha* are without tails. Sometimes, head-mark does not cover the whole letter, such as in *po*. Medial signs are of different types; and in ligature first letter is still formed in full shape. If all these are left out, even then it may not be accepted as the earliest Nāgarī inscriptional record. Moreover Sukthankar[42] has proved it as a spurious record. One of his arguments in favour of that decision is: "These plates occupy a very isolated position in the progressive development of Nāgarī."[43] He apparently is right, because the other later records such as Tālegāon,[44] Bhāṇḍak,[45] Pimpari,[46] Dhuliā,[47] Daultābād,[48] Paithan,[49] etc., are all written in proto-Nāgarī.

General Remarks

On the whole, though the characters of the Western inscriptions show a remarkable progress toward the development of Nāgarī, we are still not in a position to say that Nāgarī script evolved during the eighth century A.D., even in Western India to be precise.

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15. *Ibid*., pp. 139–42, Pl. XXIA.
16. Sastri, H., *EI*, XIII, Pl. f., p., 132; & also cf., the form of *te*, Fig. 2a, Table D.

17. *EI*, IV, p., 209.
18. *CII*, III, p., 202.
19. *The Origin.*, p., 42.
20. Fleet, *CII*, III, p., 205.
21. *The Origin.*, p., 45.
22. *EI*, XX, p., 38.
23. *Indian.*, p., 129.
24. Dani, 130.
25. *Ibid.*
26. Cf. Verma, *Development.*, Tables III–VI, column d.
27. *Indian.*, p., 155.
28. *Indian.*, p., 160.
29. *EI*, IX, Pl. f. p., 190.
30. The Jaina writer of Western India employed a somewhat variant form of Nāgarī, termed as Jaina-Nāgarī.
31. *CII*, IV, pp. 174 & 177.
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33. Cf. *CII*, IV, Pls. X & XI.
34. Cf. *Ibid.*, Pl. XIII.
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3. Indragadh inscription of Nannappa of A.D. 710, Krishna Deva, *EI*, XXXII, pp. 112–17, Pl. f. p., 116; (Table A_9).*
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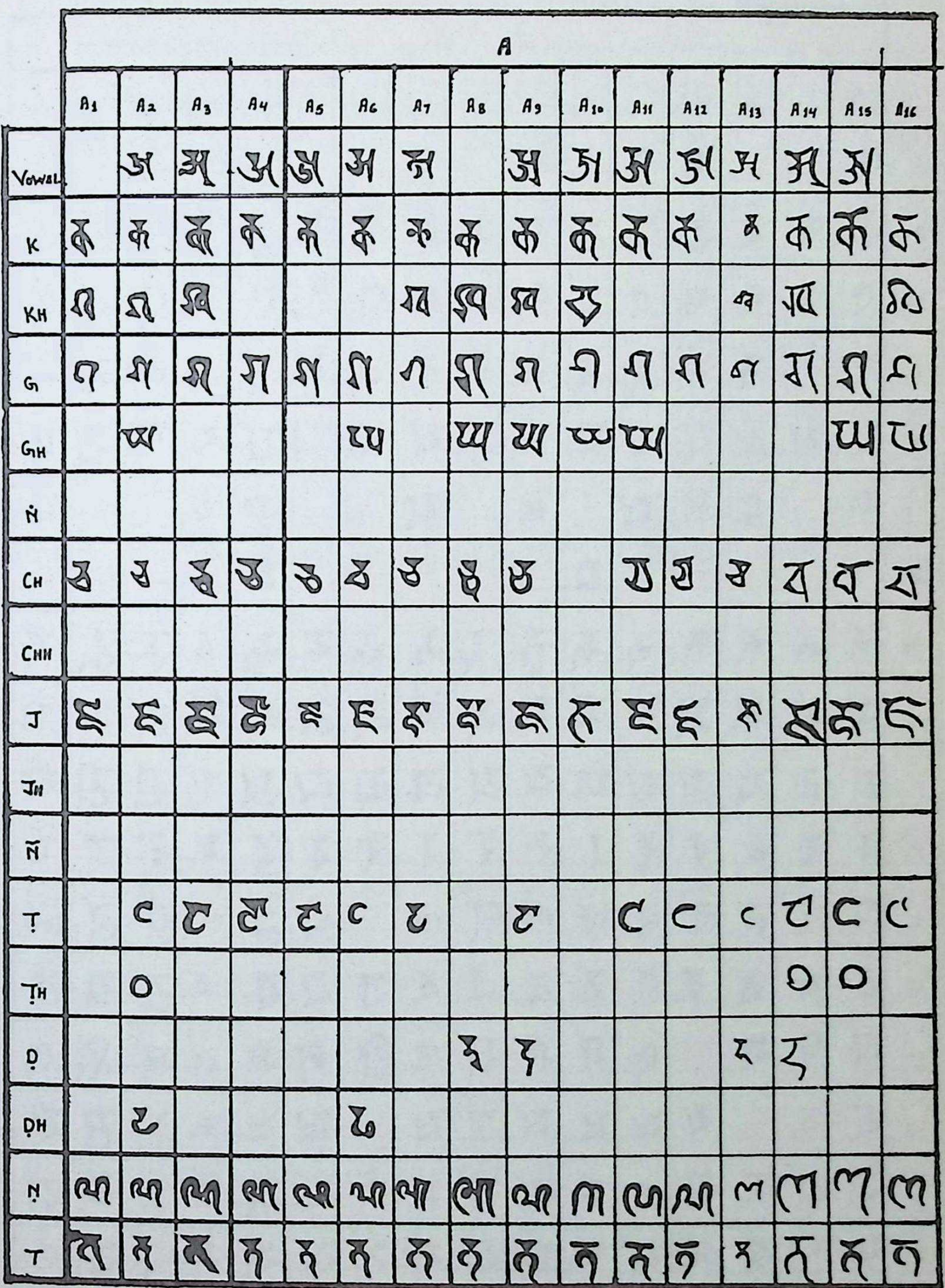
References for Plates 1 to 30
(6th–8th Cent.)

Table	Inscription	Date in A.D.	Reference
A_1	Bodh-Gayā inscription of Mahānāma	588	*IA*, XV, Pl. f. p., 358
A_2	Aphsad inscription of Ādityasenana	—	*CII*, III, Pl, XXVIII
	Śāhapur inscription of Ādityasena	672	*CII*, III, Pl. XXIXA
	Deo-Barṇārk inscription of Jivitagupta II	—	*CII*, III, Pl. XXIXB
A_3	Nālandā inscription of Yaśovarmā	—	*EI*, XX, Pl. f. p., 43
A_4	Bānskherā plate of Harsha	628	*EI*, IV, Pl., f. p., 210
A_5	Madhuban plate of Harsha	631	*EI*, VII, Pl. f. p., 158
A_6	Vasantgaḍh inscription of Varmalāta	—	*EI*, IX, Pl. f. p., 190
A_7	Jhālrāpāṭaṇ inscription of Durgagaṇa	—	*IA*, V, Pls. b. pp. 180–81
A_8	Tasāī inscription	788	*EI*, XXXVI, Pls. f. pp. 49 & 54
	Khaṇḍelā inscription	807	*EI*, XXXIV, Pl. f. p., 163

A_9	Indragaḍh inscription of Naṇṇappa	710	*EI*, XXXII, Pl. f. p., 116
A_{10}	Saugor inscription of Śaṅkaragaṇa I	—	*CII*, IV, Pl. XXIX A
	Chhoṭi Deori inscription of Śaṅkaragaṇa I	—	*CII*, IV, Pl. XXIX B
A_{11}	Tiwarakheḍ plates of Nannarāja	631	*EI*, XI, Pl. f. p., 279
A_{12}	Multāī plates of Nandaraja	709	*IA*, XVIII, Pls. b. pp. 234–35.
A_{13}	Hiḷol plates of Chandrāditya	—	*EI*, XXXIV, Pl. f. p., 217.
A_{14}	Sāmangaḍh plates of Dantidurga	753	*IA*, XI, Pls. b. pp.110-11 & 112-13
A_{15}	Daultābād plates of Śaṅkaragaṇa	793	*EI*, IX, Pls. b. pp. 196–97 & f. p., 198
A_{16}	Purushottampur plates of Mādhavavarmā II	—	*EI*, XXX, Pls. b. pp. 266–67
	Chaṇḍeśvara plates of Dharmarāja	—	*EI*, XXX, Pls. b. pp. 272–73.

6th-8th CENTURY A.D. . PLATE 1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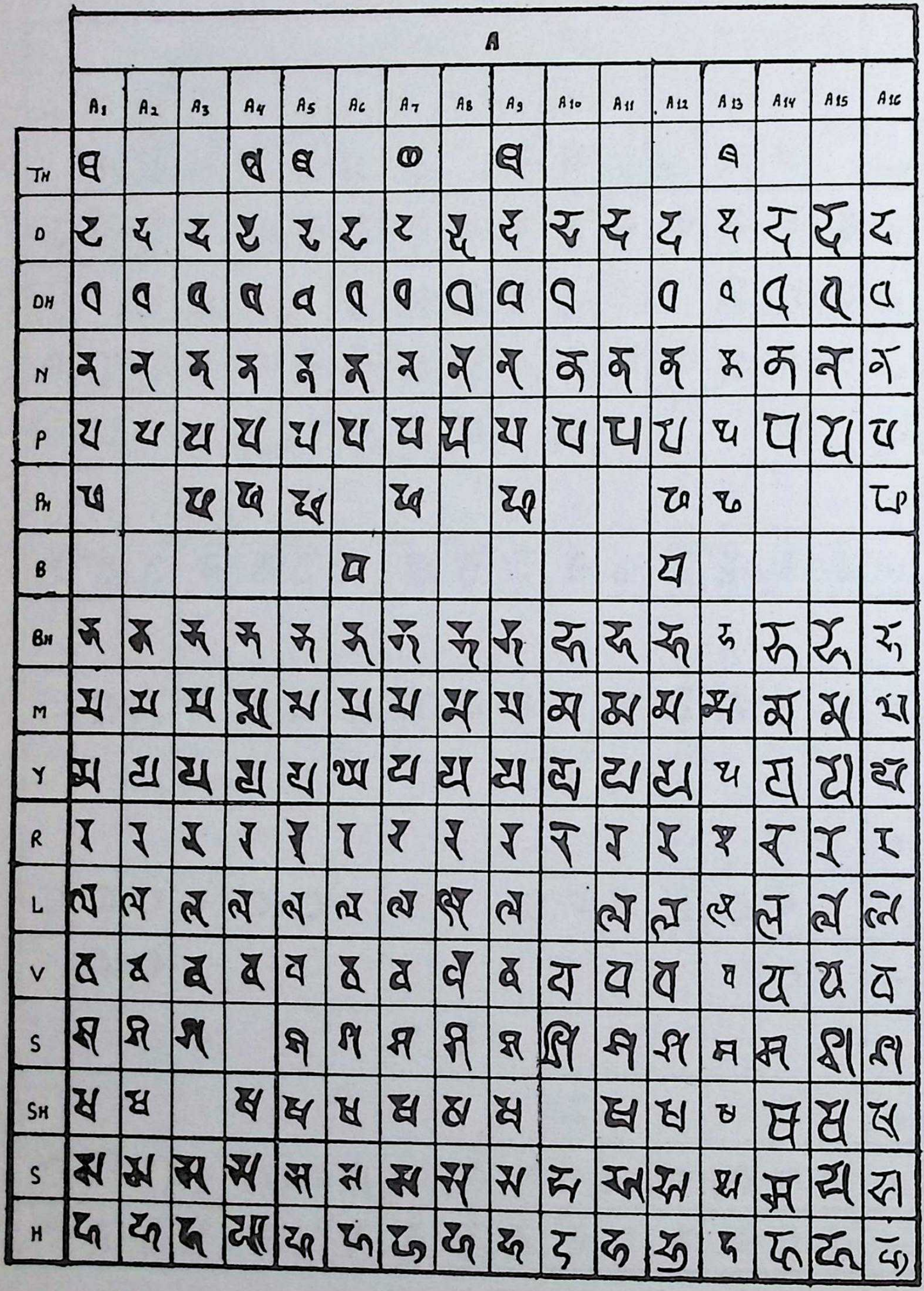
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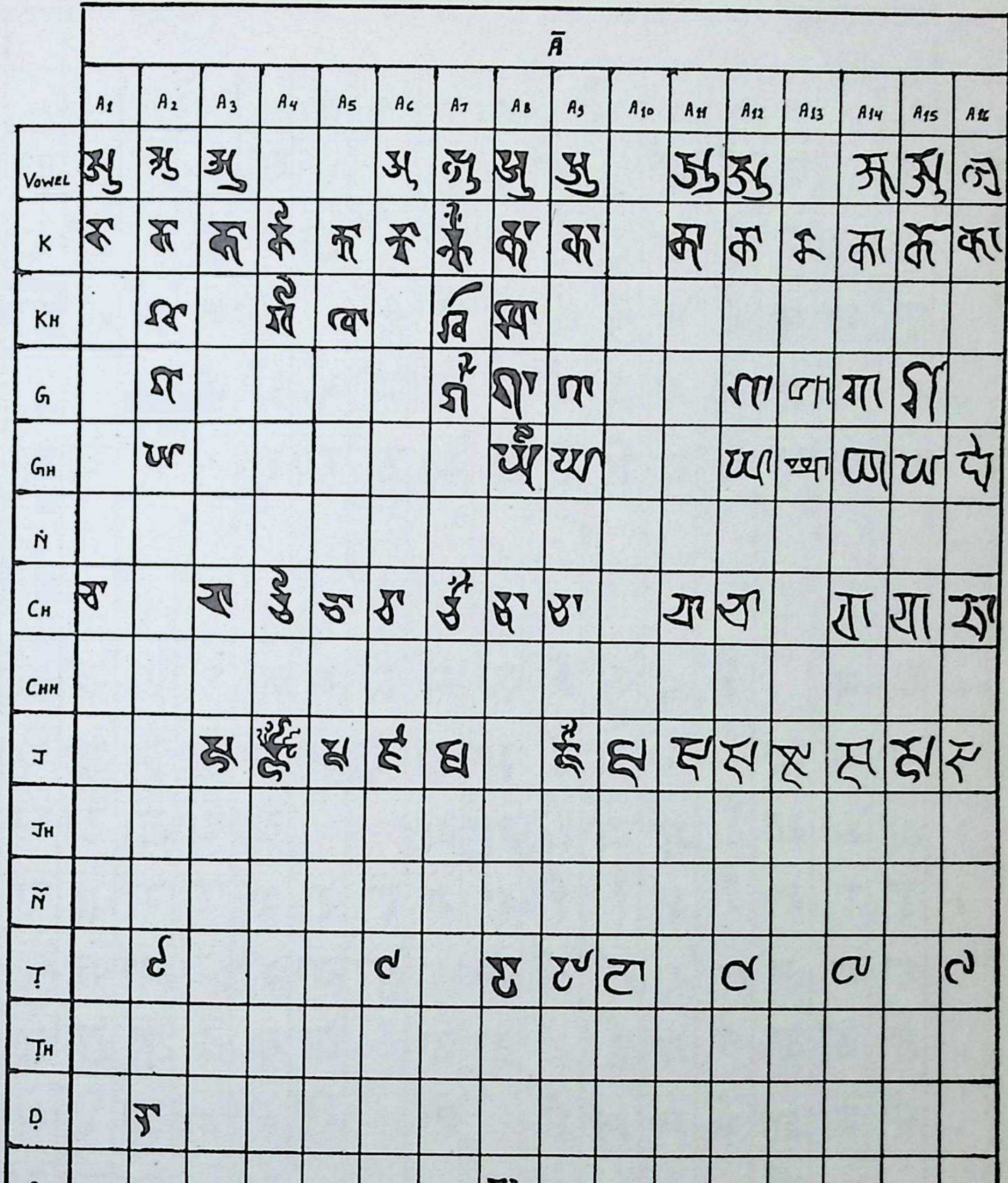
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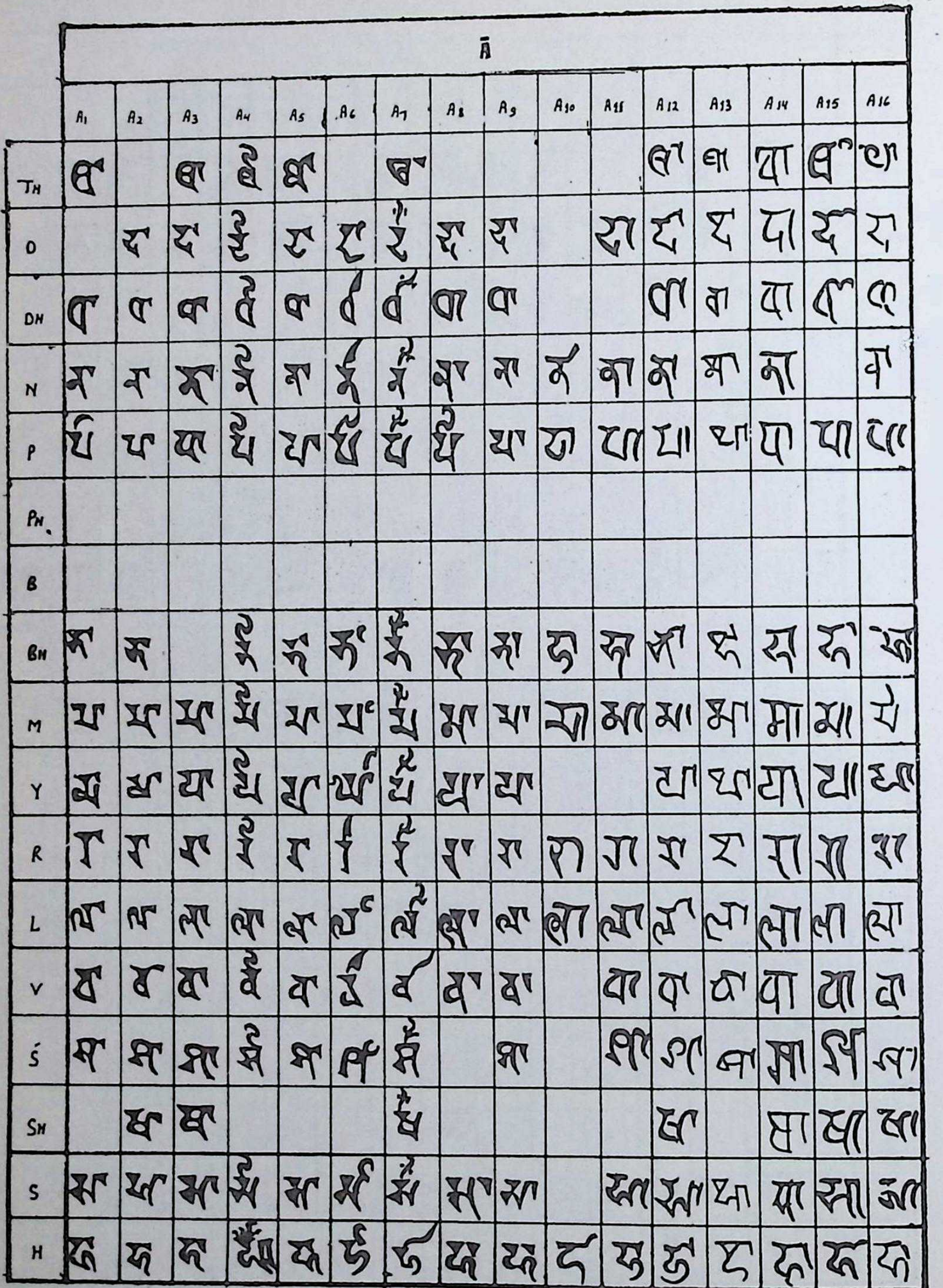
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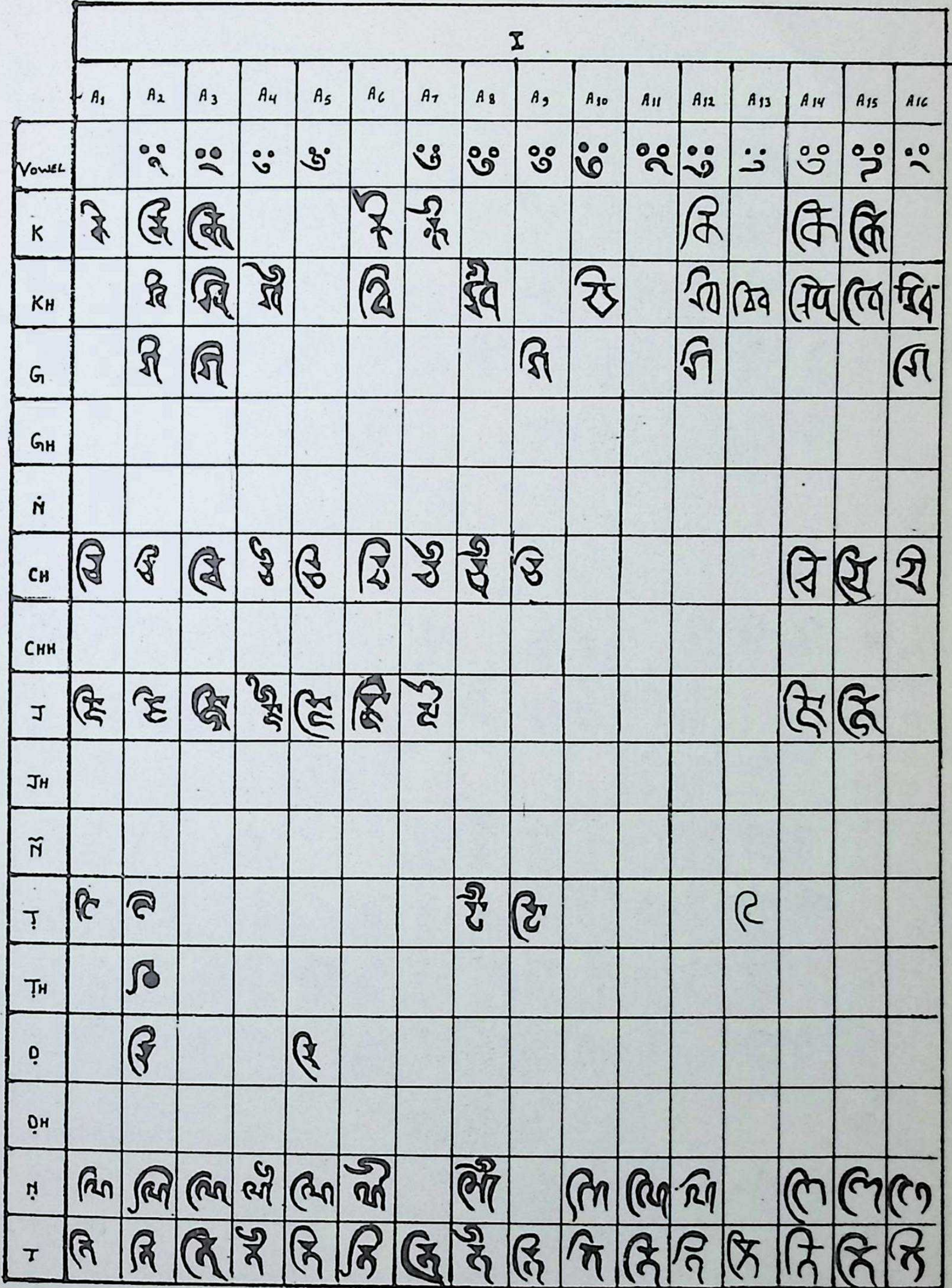
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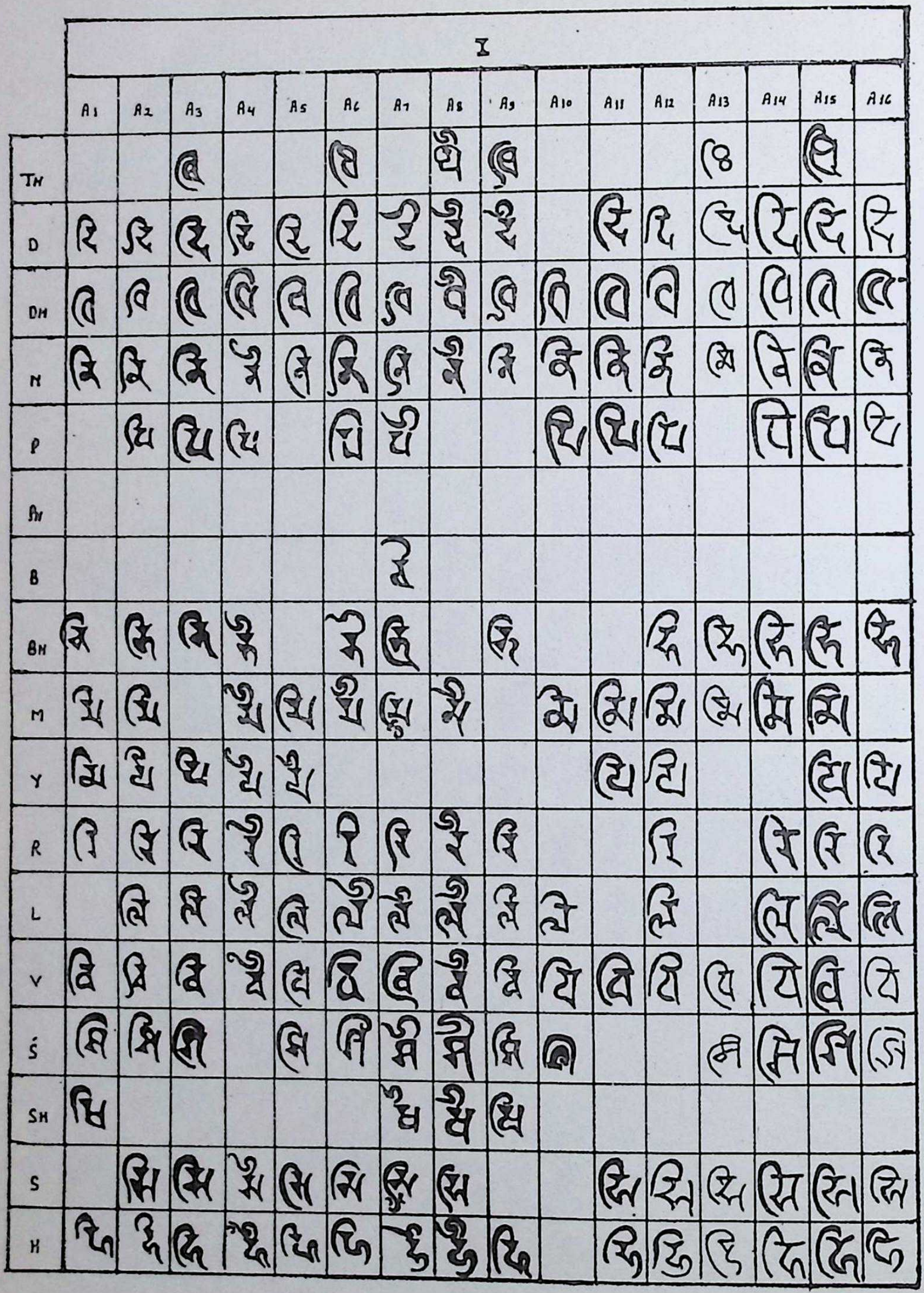
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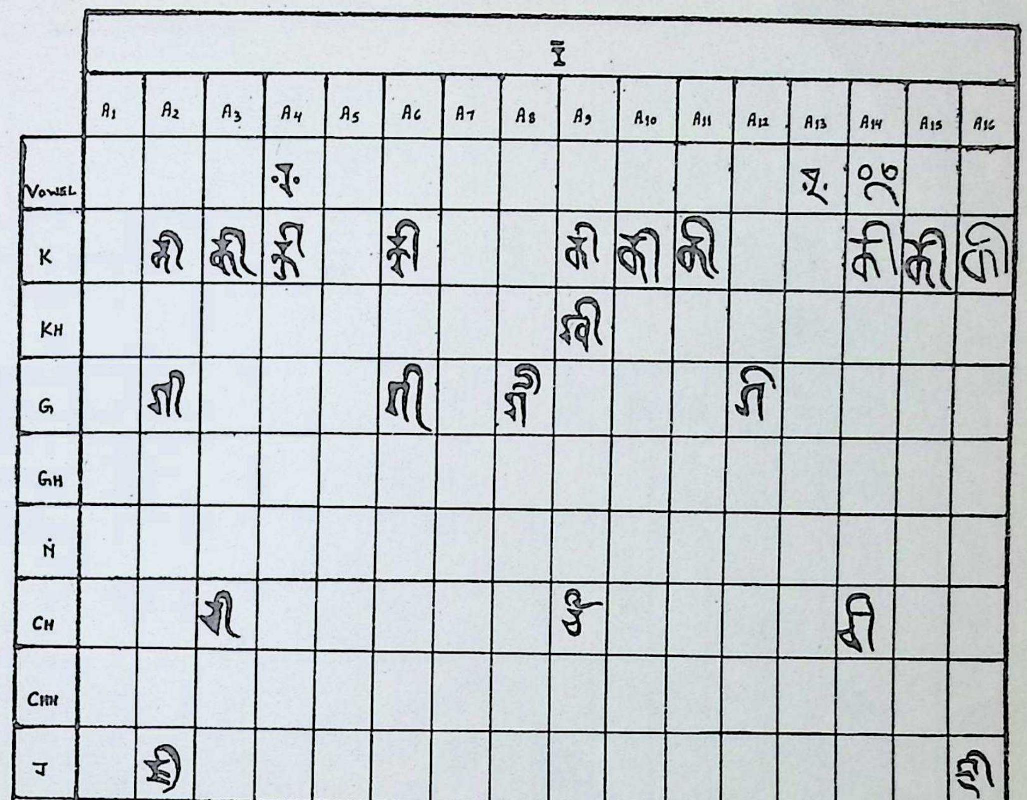
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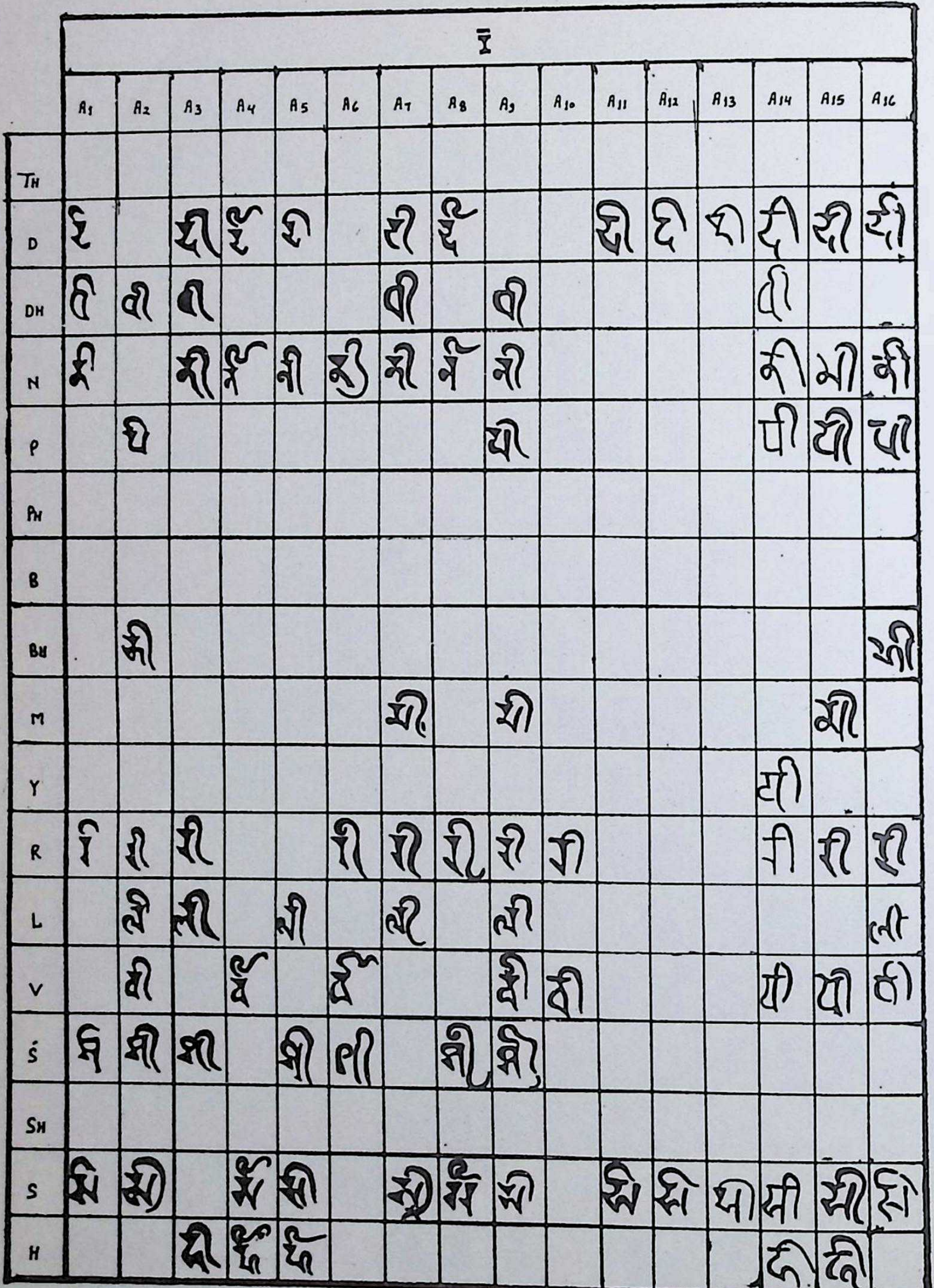
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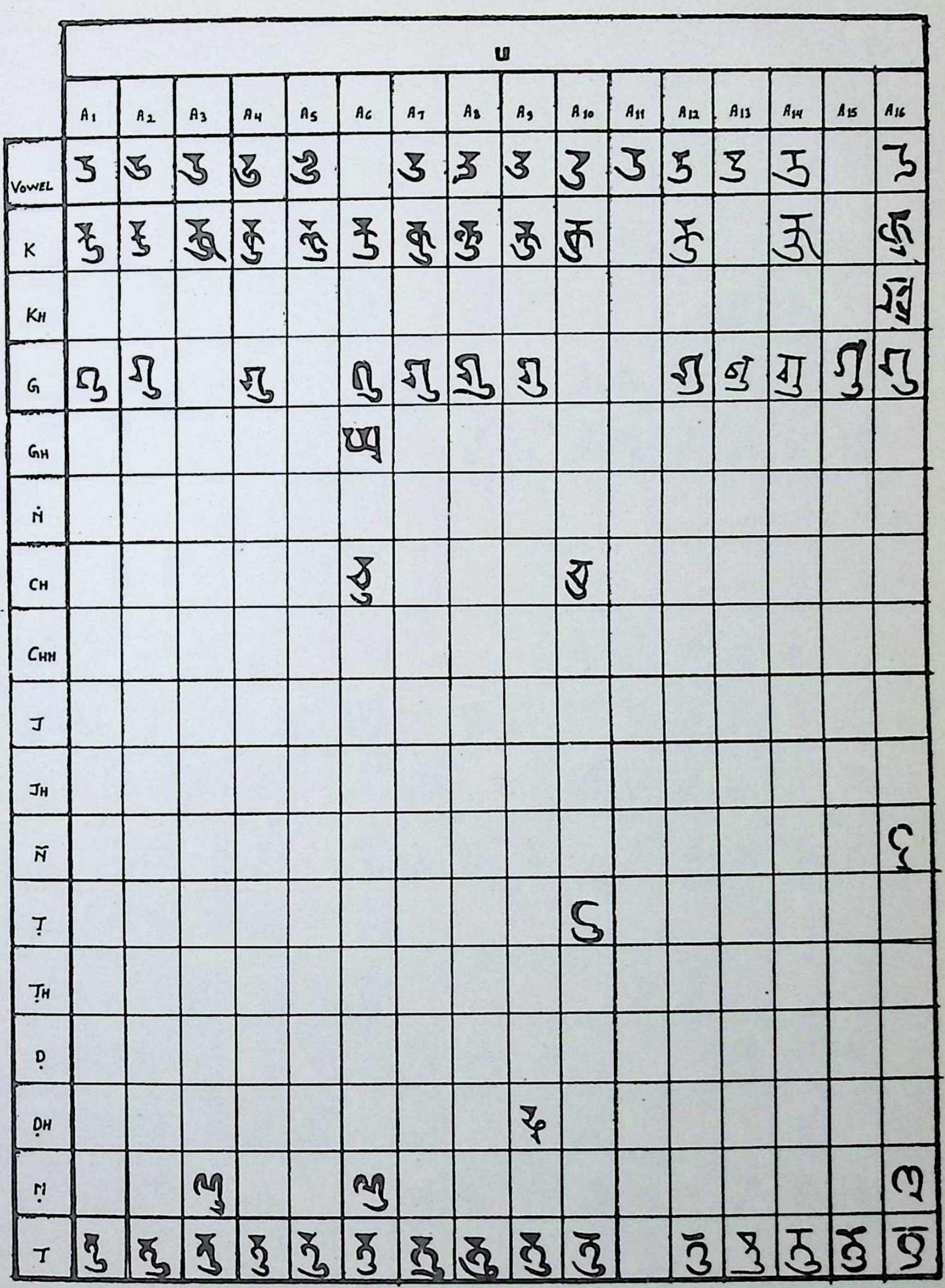
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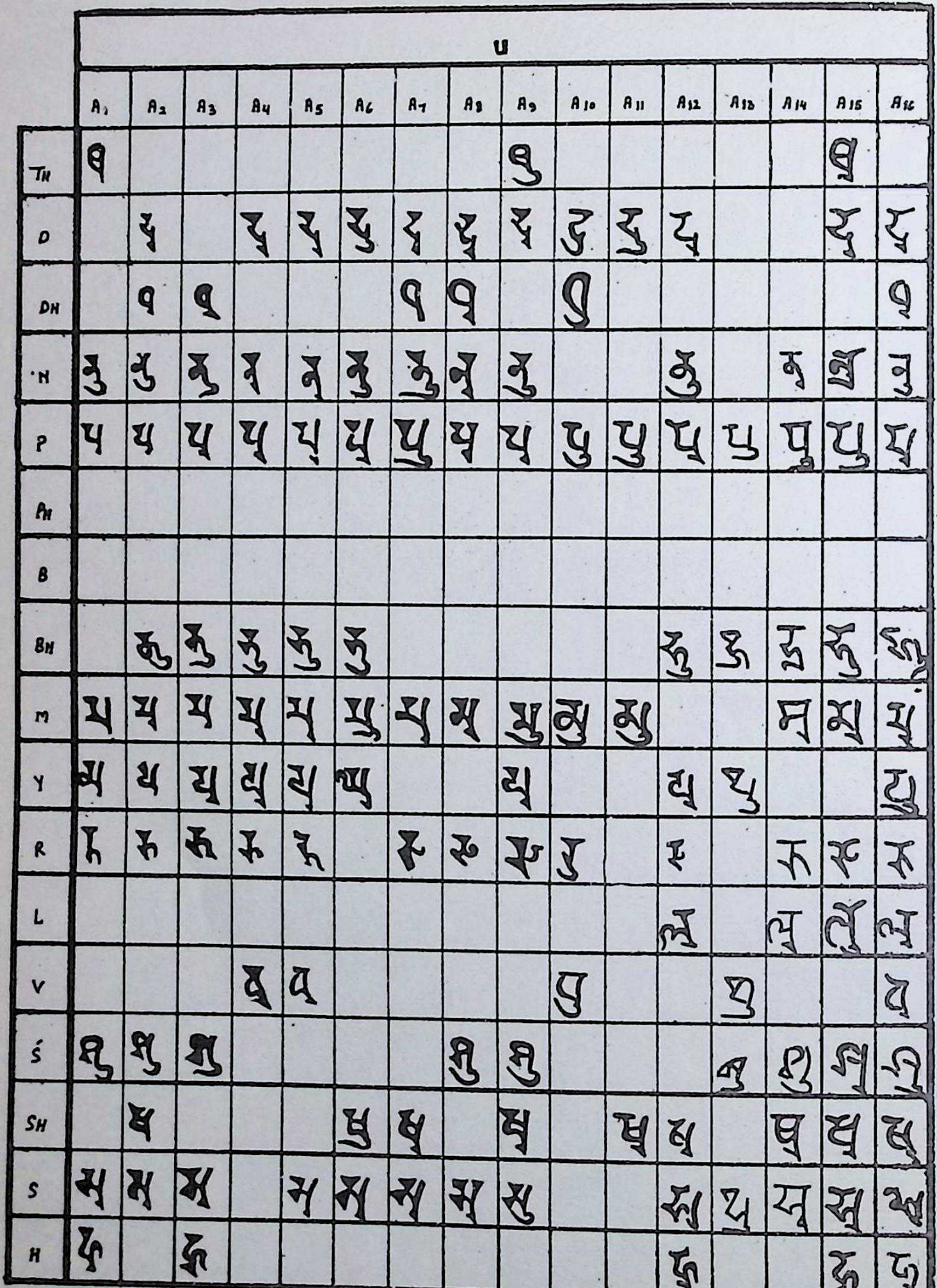
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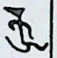
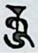
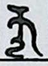
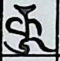
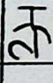
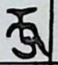
K																
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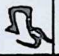
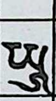
G																
GH																
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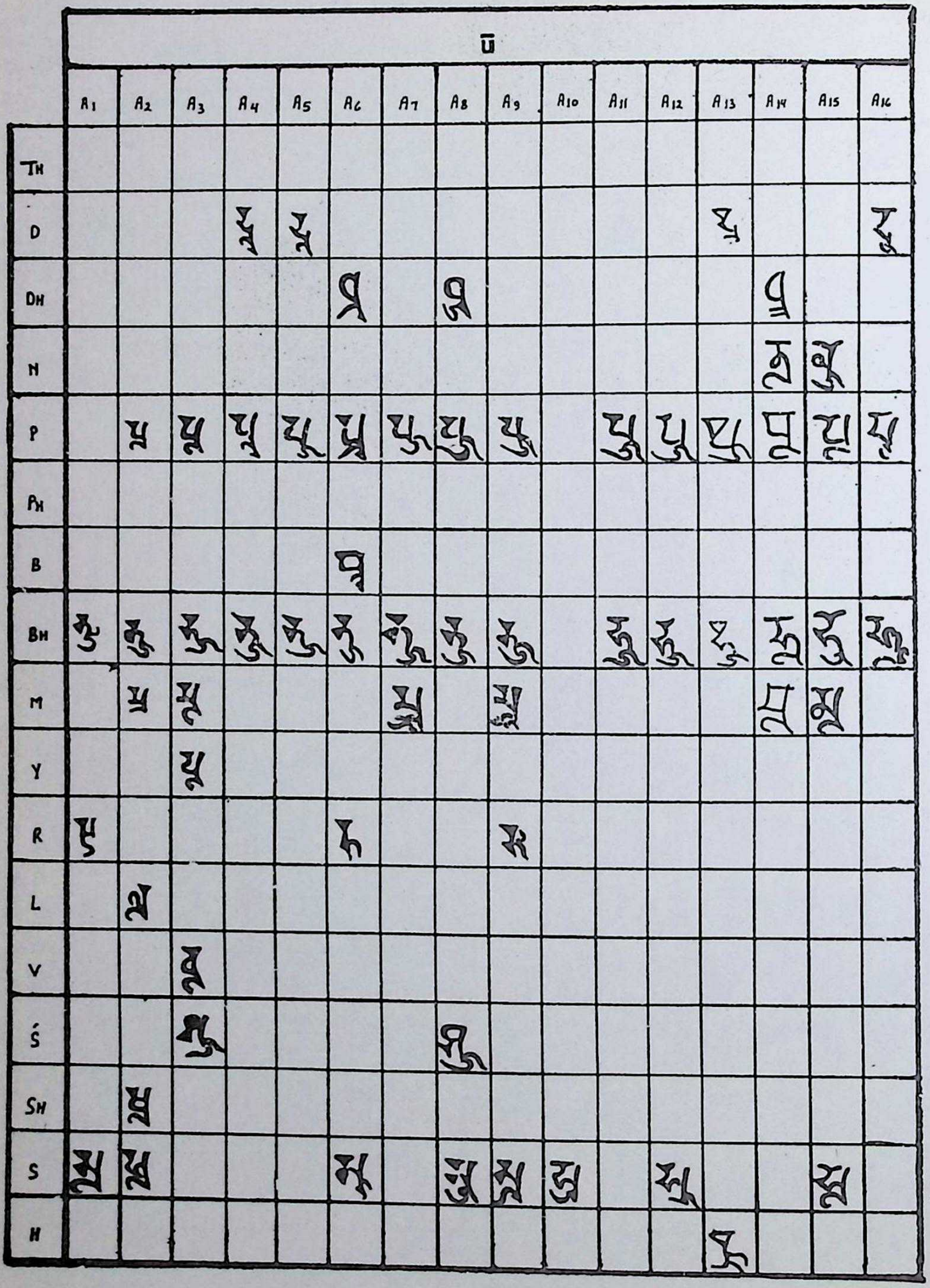
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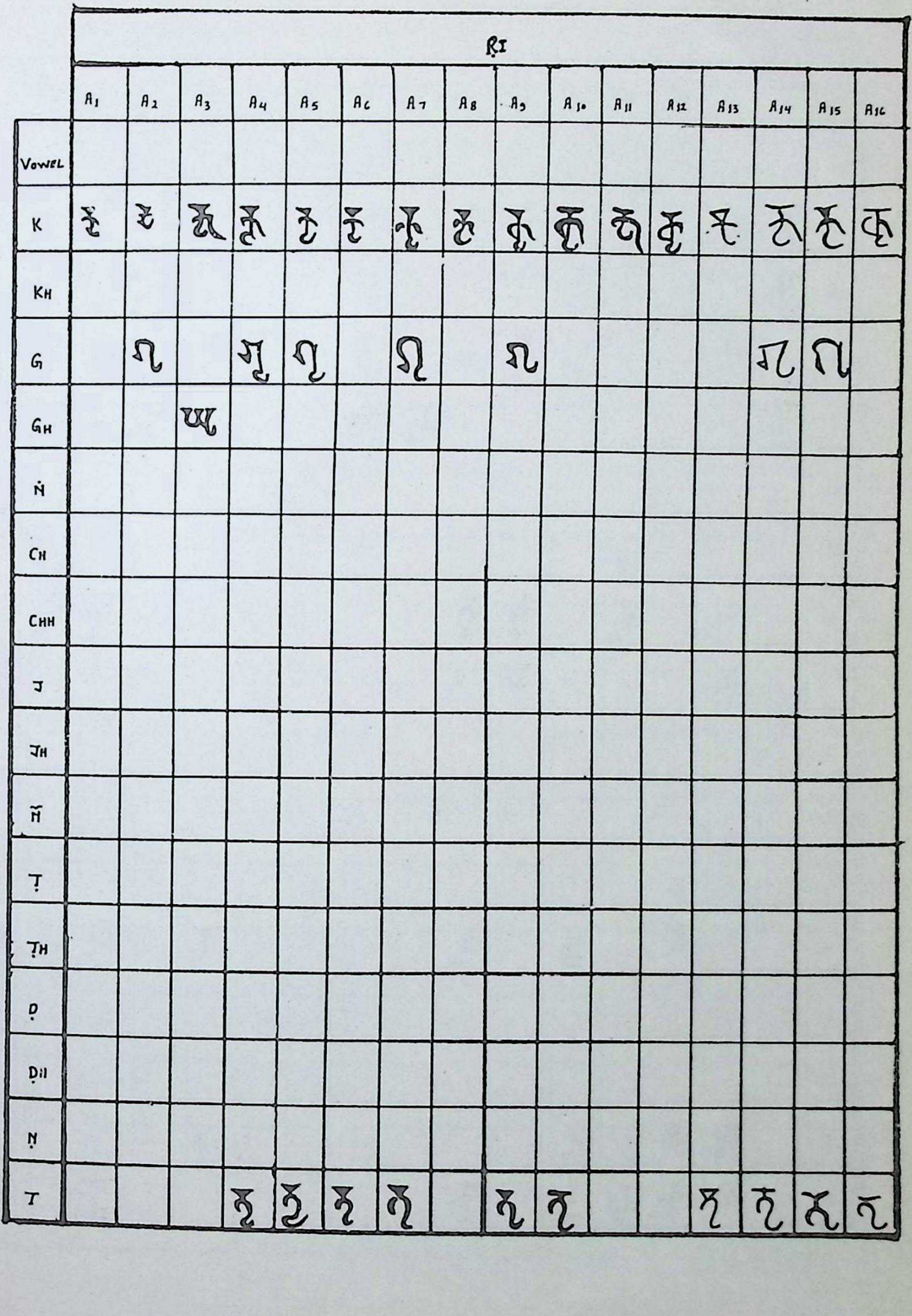
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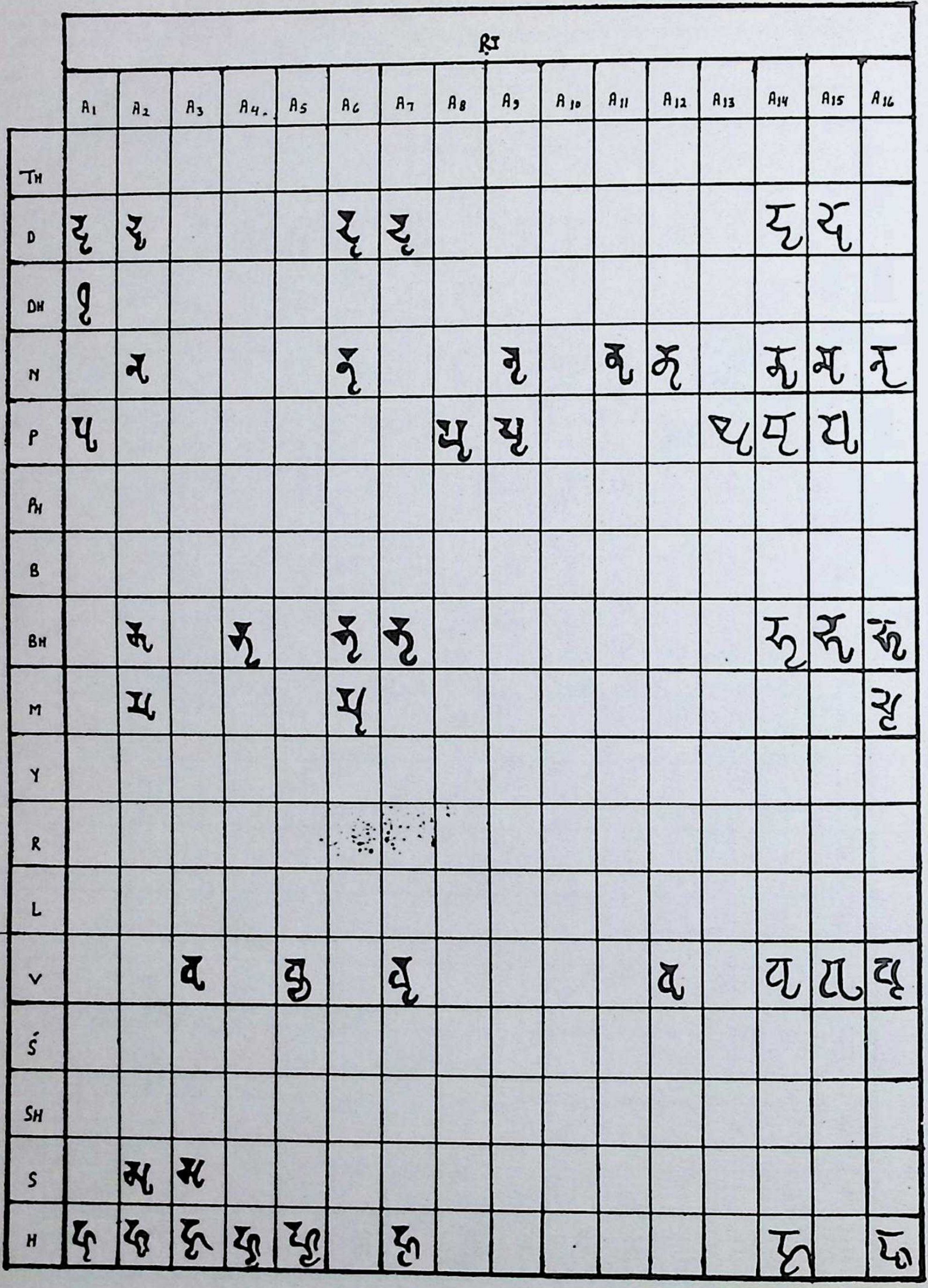
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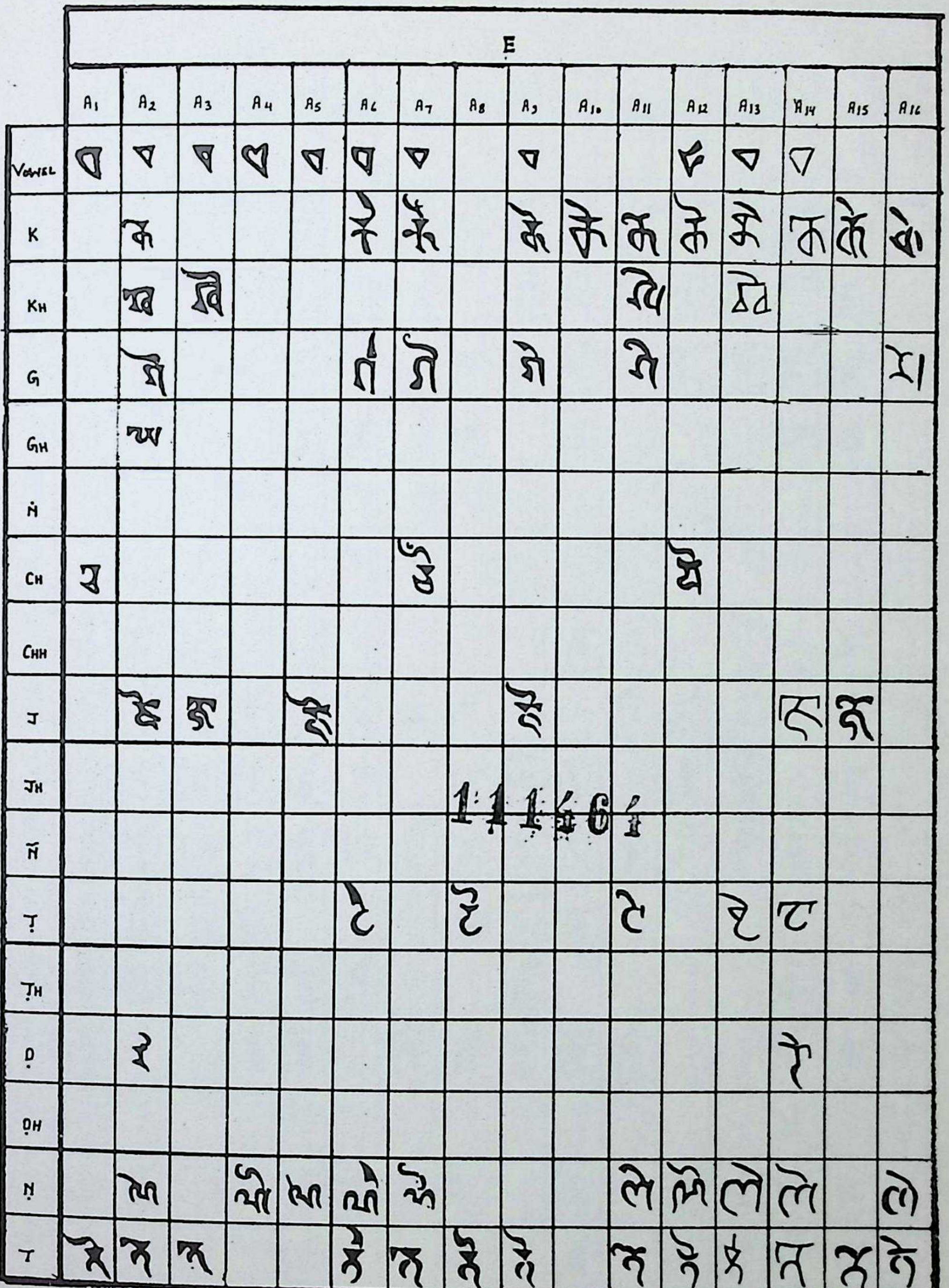
PLATE 15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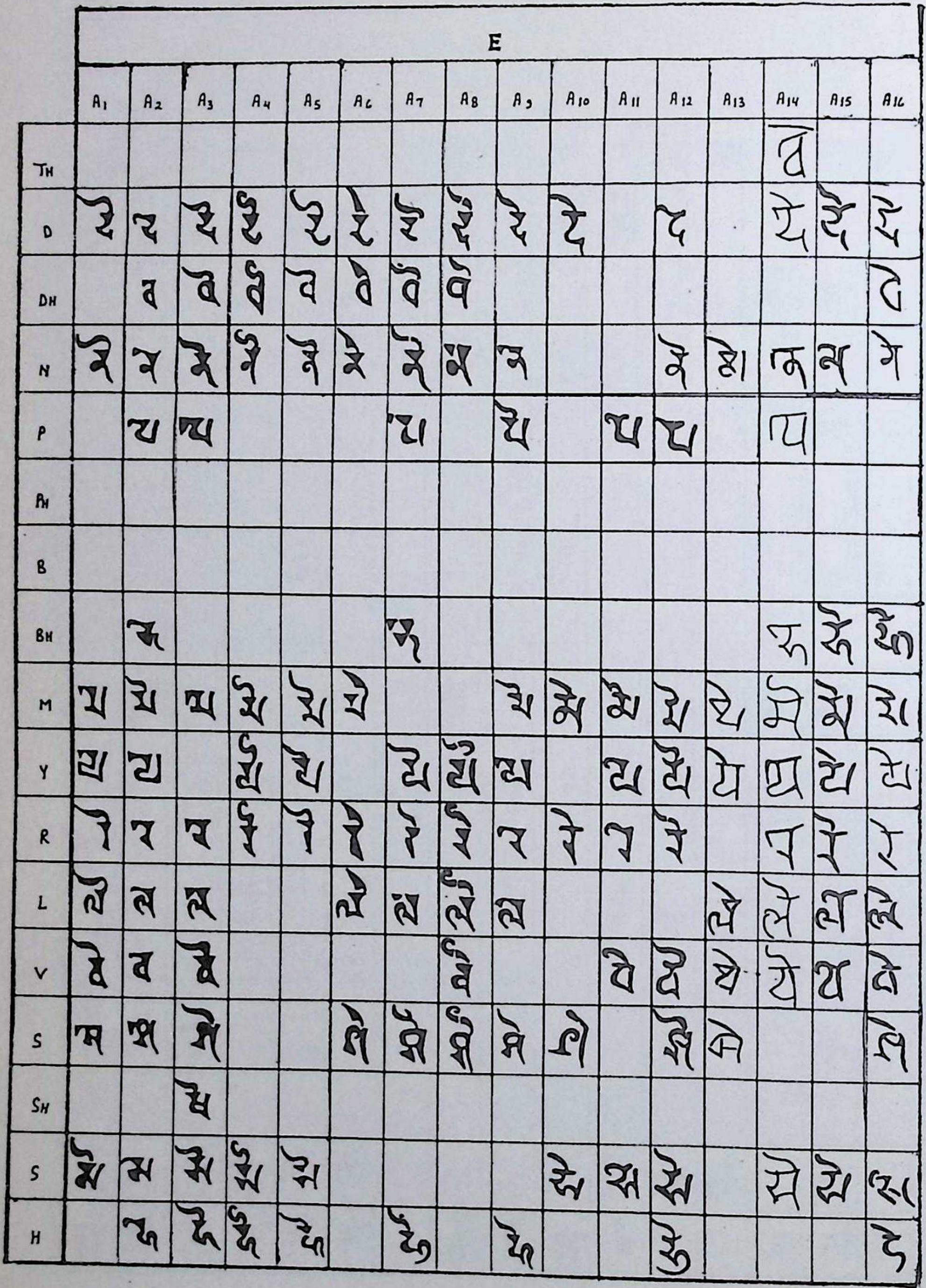
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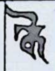
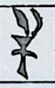
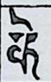
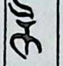
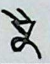
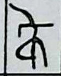
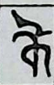
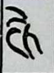
K																
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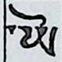
GH																
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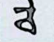
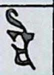
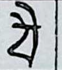
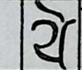
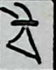
CH																
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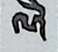
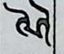
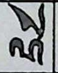
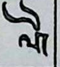
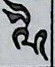
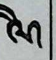
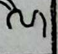
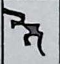
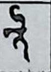
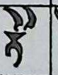
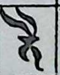
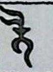
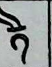
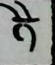
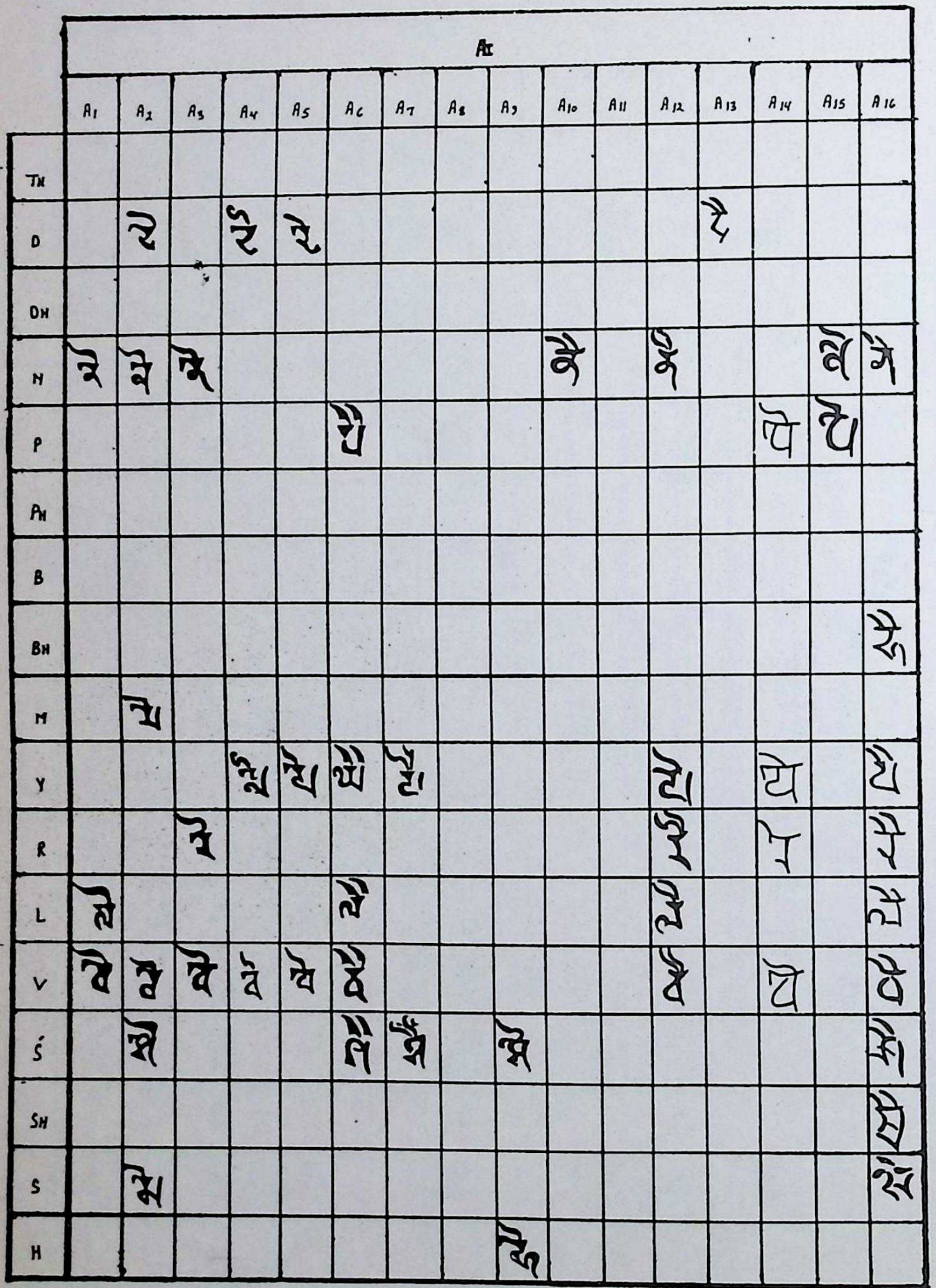
Ṇ																
T																

6th-8th CENTURY A.D.

PLATE 18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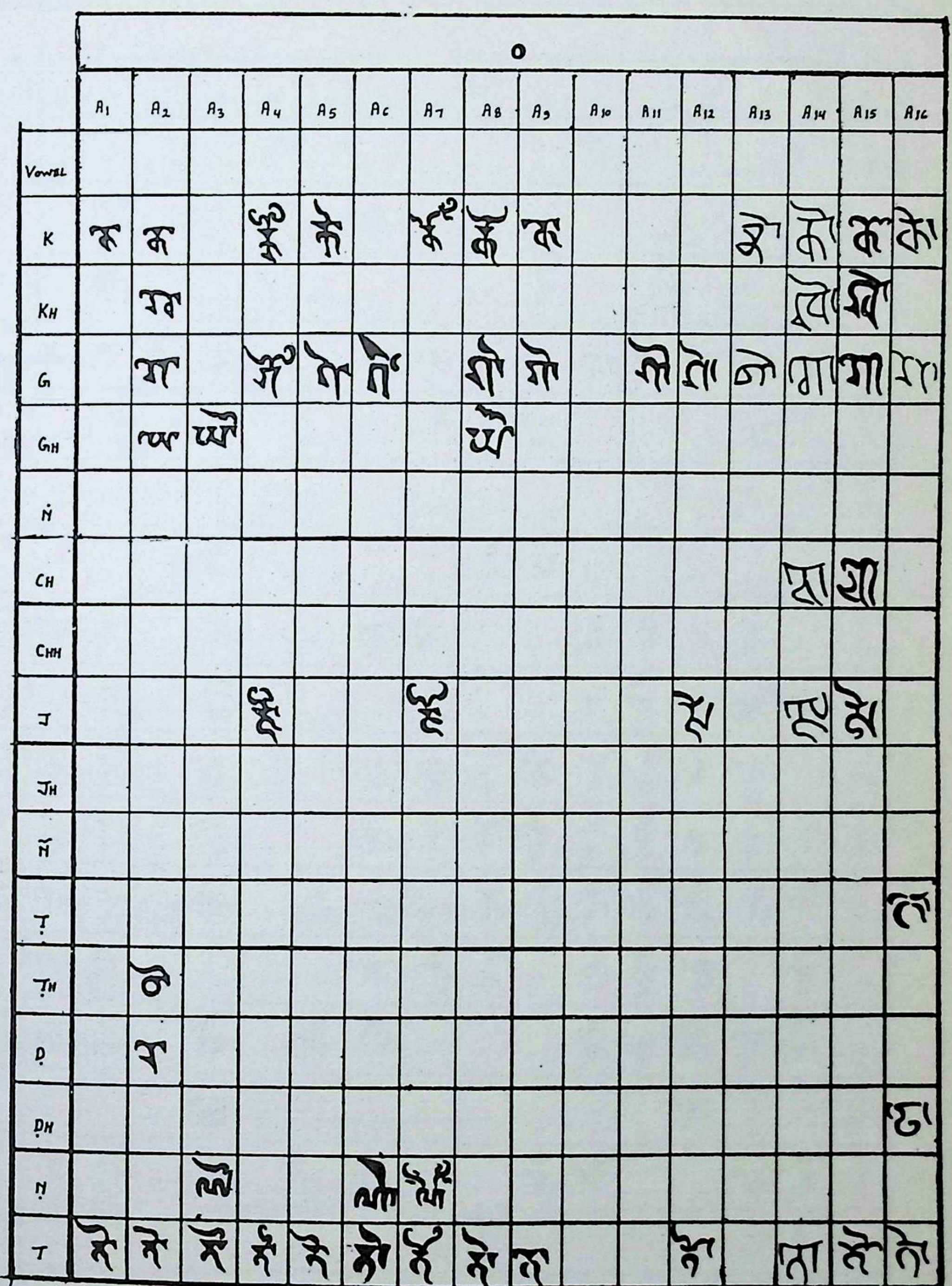
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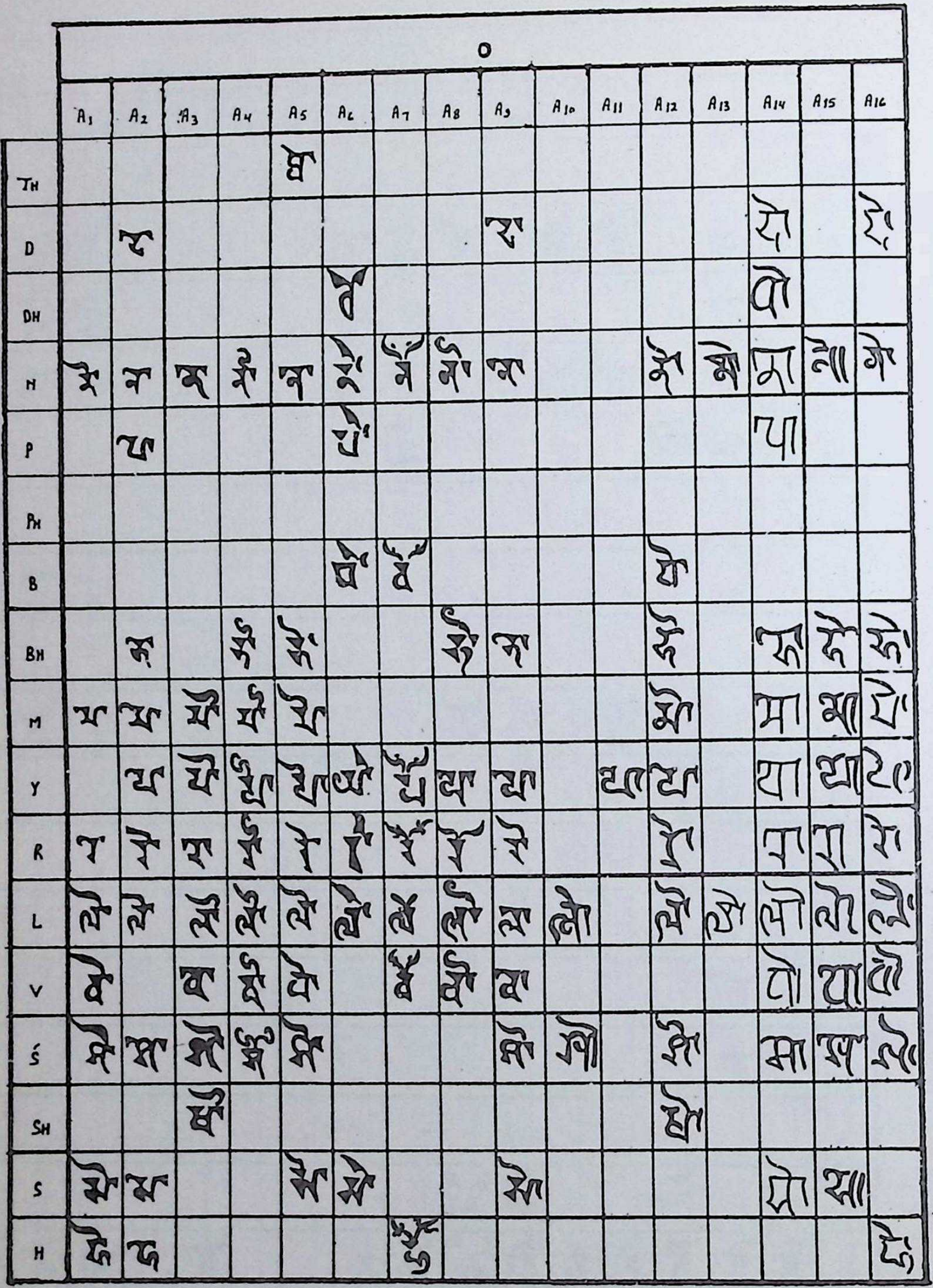
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6th-8th CENTURY A.D. PLATE 21

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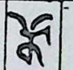
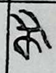
K																
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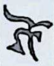
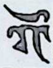
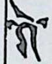
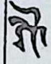
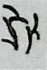
G																
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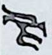
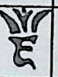
J																
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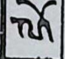
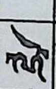
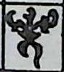
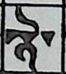
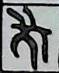
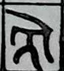
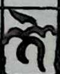
Ṇ																
T																

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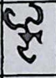
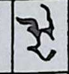
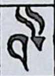
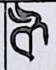
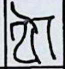
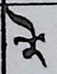
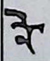
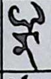
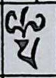
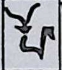
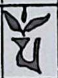
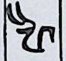
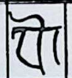
D																
DH																
N																
P																
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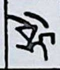
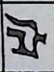
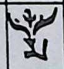
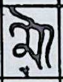
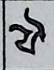
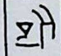
BH																
M																
Y																
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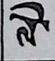
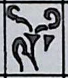
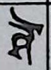
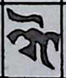
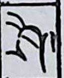
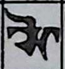
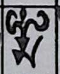
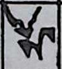
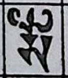
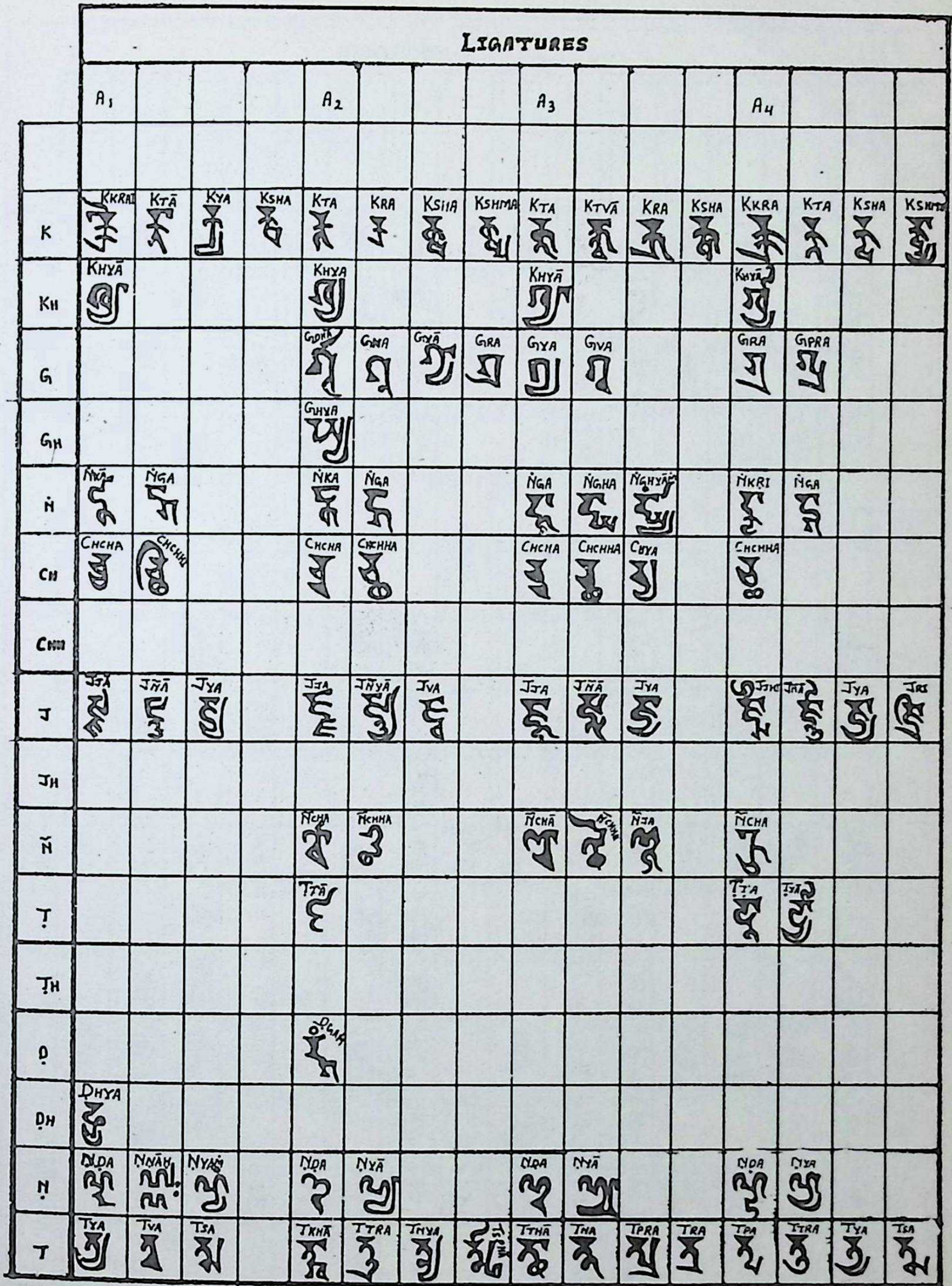
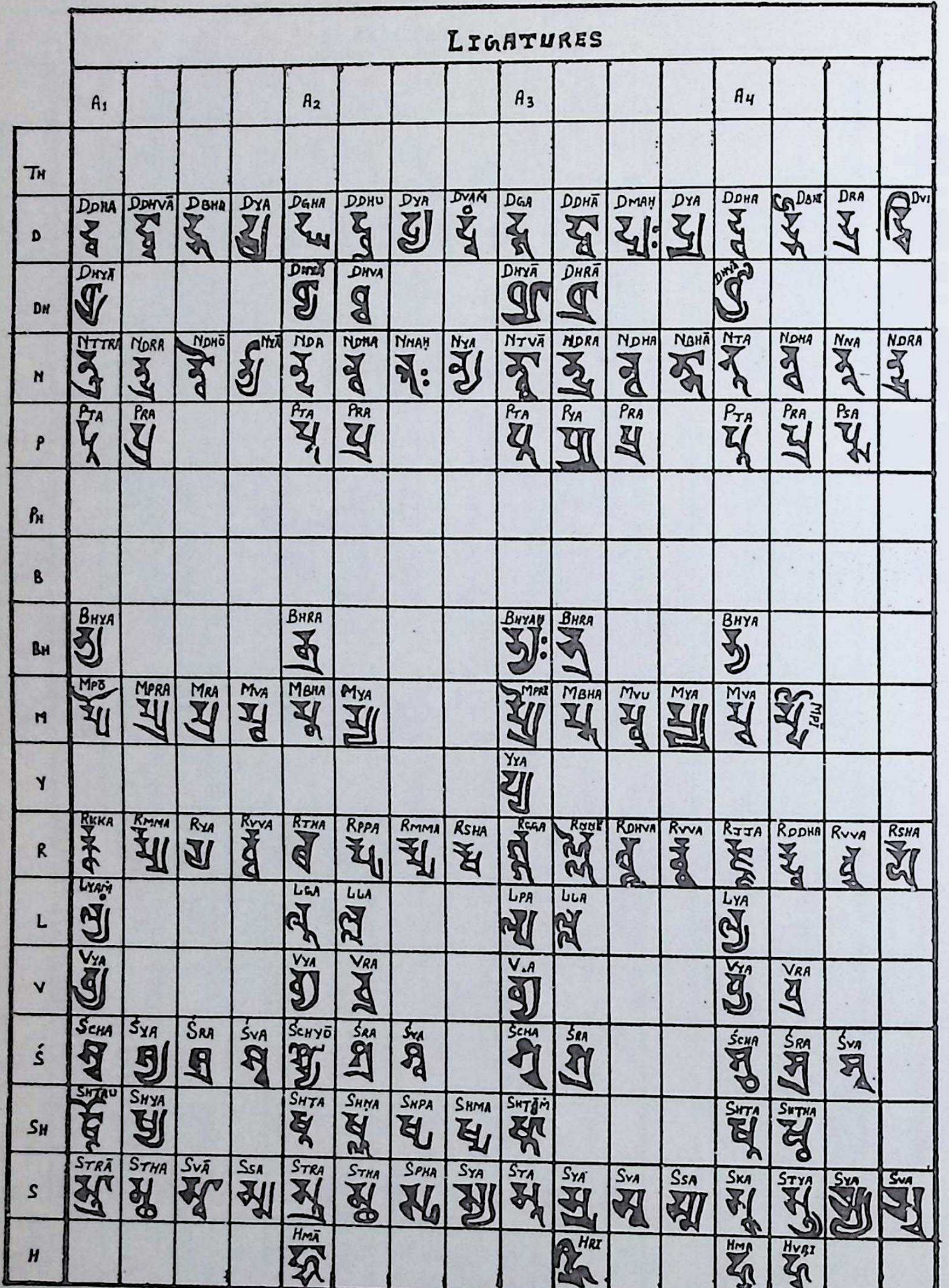
L																
V																
Ś																
SH																
S																
H																



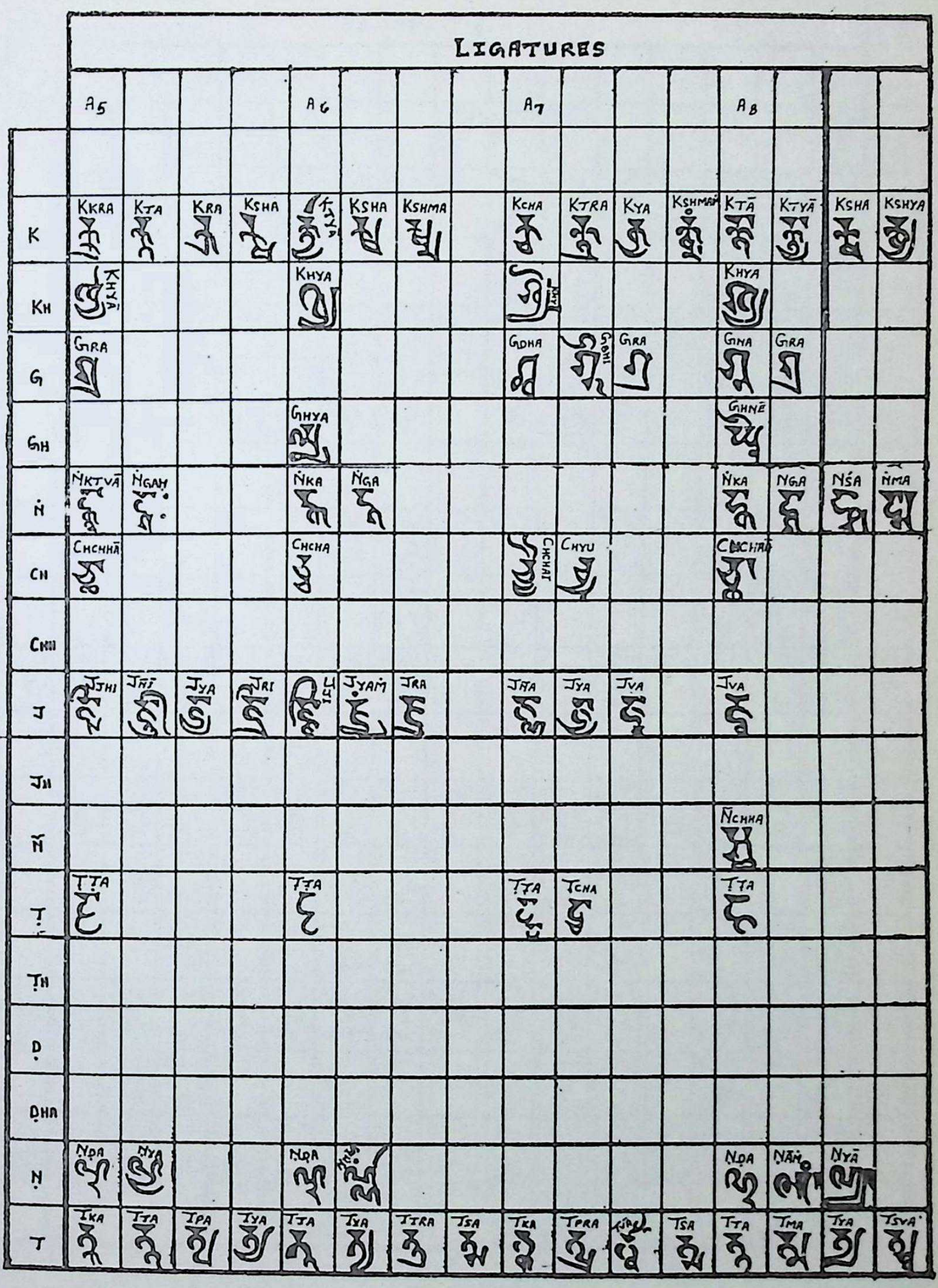
LIGATURES

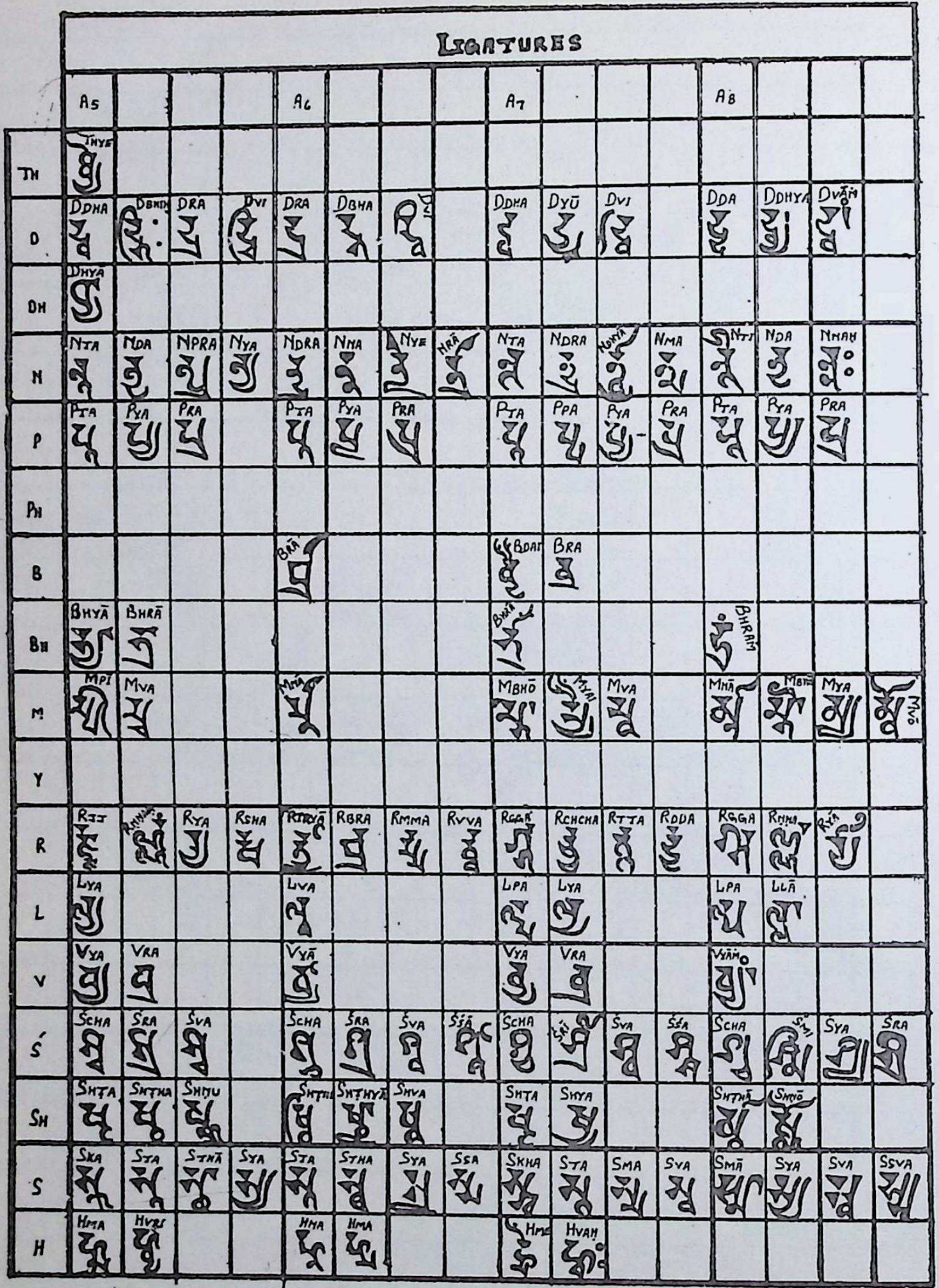
	A₁				A₂				A₃				A₄			
K	KKRA	KTĀ	KYA	KSHA	KTA	KRA	KSHA	KSHMA	KTA	KTVĀ	KRA	KSHA	KKRA	KTA	KSHA	KSHMA
KH	KHYĀ				KHYA				KHYĀ				KHYĀ			
G					GDHĀ	GNA	GYĀ	GRA	GYA	GVA			GRA	GPRA		
GH					GHYA											
Ṅ	ṄKĀ	ṄGA			ṄKA	ṄGA			ṄGA	ṄGHA	ṄGHYĀ		ṄKṚI	ṄGA		
CH	CHCHA	CHCHHA			CHCHA	CHCHHA			CHCHA	CHCHHA	CHYA		CHCHHA			
CHH																
J	JJĀ	JÑĀ	JYA		JJA	JÑYĀ	JVA		JJA	JÑĀ	JYA		JJHA	JÑĀ	JYA	JRI
JH																
Ñ					ÑCHA	ÑCHHA			ÑCHĀ	ÑCHHA	ÑJA		ÑCHA			
Ṭ					ṬṬĀ								ṬṬA	ṬṬĀ		
ṬH																
Ḍ					ḌGA											
ḌH	ḌHYA															
Ṇ	ṆḌA	ṆṆĀ	ṆYĀ		ṆḌA	ṆYĀ			ṆḌA	ṆYĀ			ṆḌA	ṆYA		
T	TYA	TVA	TSA		TKHĀ	TTRA	TNYA	TSPHĀ	TTHĀ	TNA	TPRA	TRA	TPA	TTRA	TYA	TSA



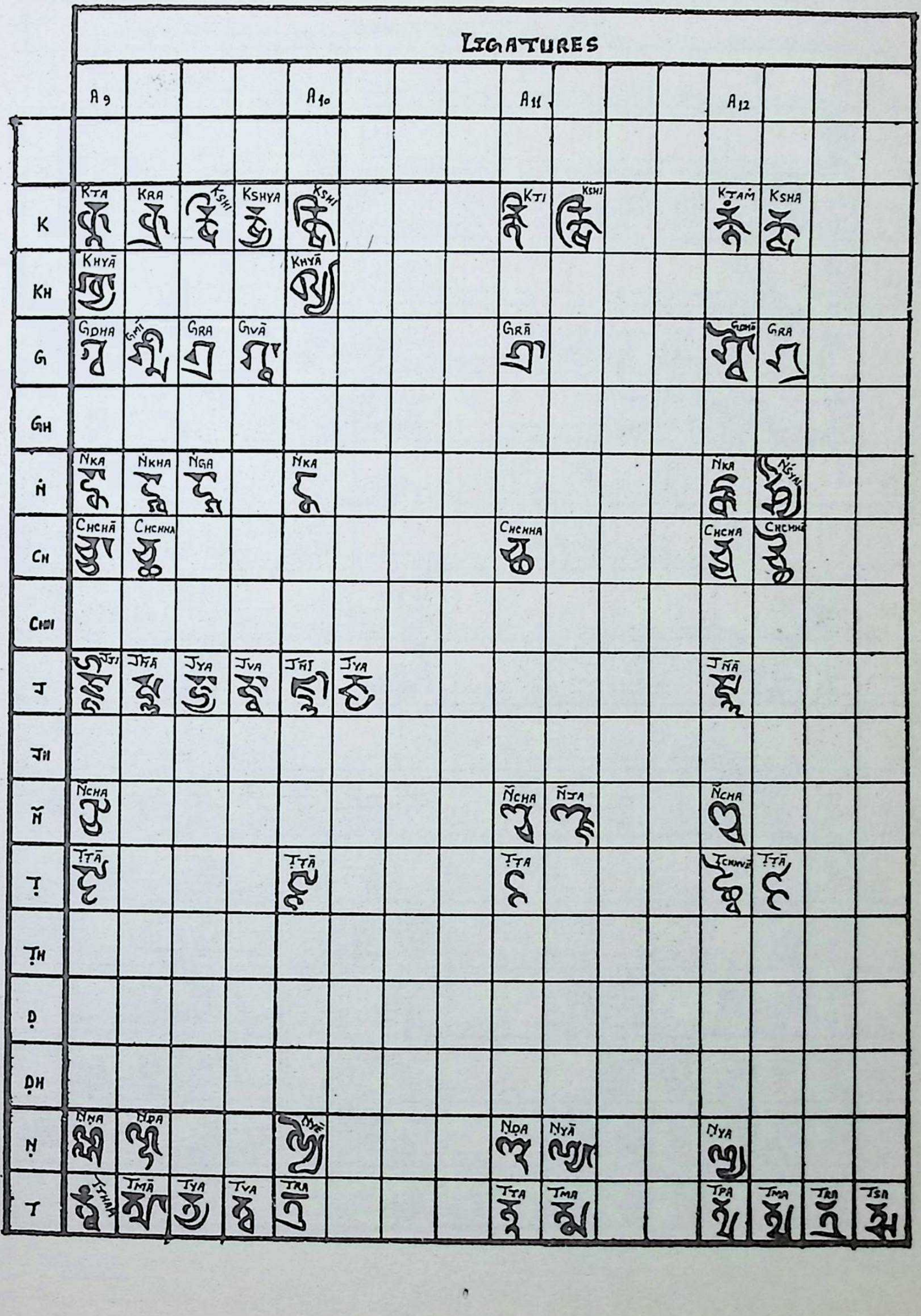
LIGATURES

	A1				A2				A3				A4			
TH																
D	DDHA	DDHVĀ	DBHA	DYA	DGHA	DDHU	DYA	DVAṀ	DGA	DDHĀ	DMAḤ	DYA	DDHA	DBHI	DRA	DVI
DH	DHYĀ				DHYĀ	DHVA			DHYĀ	DHRĀ			DHYĀ			
N	NTTRA	NDRA	NDHŌ	NYĀ	NDA	NDHA	NNAḤ	NYA	NTVĀ	NDRA	NDHA	NBHĀ	NTA	NDHA	NNA	NDRA
P	PTA	PRA			PTA	PRA			PTA	PYA	PRA		PTA	PRA	PSA	
PH																
B																
BH	BHYA				BHRA				BHYAḤ	BHRA			BHYA			
M	MPŌ	MPRA	MRA	MVA	MBHA	MYA			MPRI	MBHA	MVU	MYA	MVA	MPI		
Y									YYA							
R	RKKA	RMMA	RYA	RVVA	RTHA	RPPA	RMMA	RSHA	RGGA	RNNE	RDHVA	RVVA	RJJA	RDDHA	RVVA	RSHA
L	LYAṀ				LGA	LLA			LPA	LLA			LYA			
V	VYA				VYA	VRA			V.A				VYA	VRA		
Ś	ŚCHA	ŚYA	ŚRA	ŚVA	ŚCHYŌ	ŚRA	ŚVA		ŚCHA	ŚRA			ŚCHA	ŚRA	ŚVA	
SH	SHṬAU	SHYA			SHṬA	SHṆA	SHPA	SHMA	SHṬĀṀ				SHṬA	SHṬHA		
S	STRĀ	STHA	SVĀ	SSA	STRA	STHA	SPHA	SYA	STA	SYĀ	SVA	SSA	SKA	STYA	SYA	ŚVA
H					HMĀ					HRI			HMA	HVRI		


LIGATURES
A5
A6
A7
A8
K
KKRA
KTA
KRA
KSHA
KTYA
KSHA
KSHMA
KCHA
KTRA
KYA
KSHMAṀ
KTĀ
KTYĀ
KSHA
KSHYA
KH
KHYĀ
KHYA
KHYA
G
GRA
GDHA
GBHI
GRA
GNA
GRA
GH
GHYA
GHNĒ
Ṅ
ṄKTVĀ
ṄGAṂ
ṄKA
ṄGA
ṄKA
ṄGA
ṄŚA
ṄMA
CH
CHCHHĀ
CHCHA
CHCHAI
CHYU
CHCHHĀ
CHH
J
JJHI
JHĪ
JYA
JRI
JYAṀ
JRA
JHA
JYA
JVA
JVA
JH
Ñ
ÑCHHA
Ṭ
ṬṬA
ṬṬA
ṬṬA
ṬCHA
ṬṬA
ṬH
Ḍ
ḌHA
Ṇ
ṆḌA
ṆYA
ṆḌA
ṆḌA
ṆĀṀ
ṆYĀ
T
TKA
TTA
TPA
TYA
TTA
TYA
TTRA
TSA
TKA
TPRA
TSA
TTA
TMA
TYA
TSVA

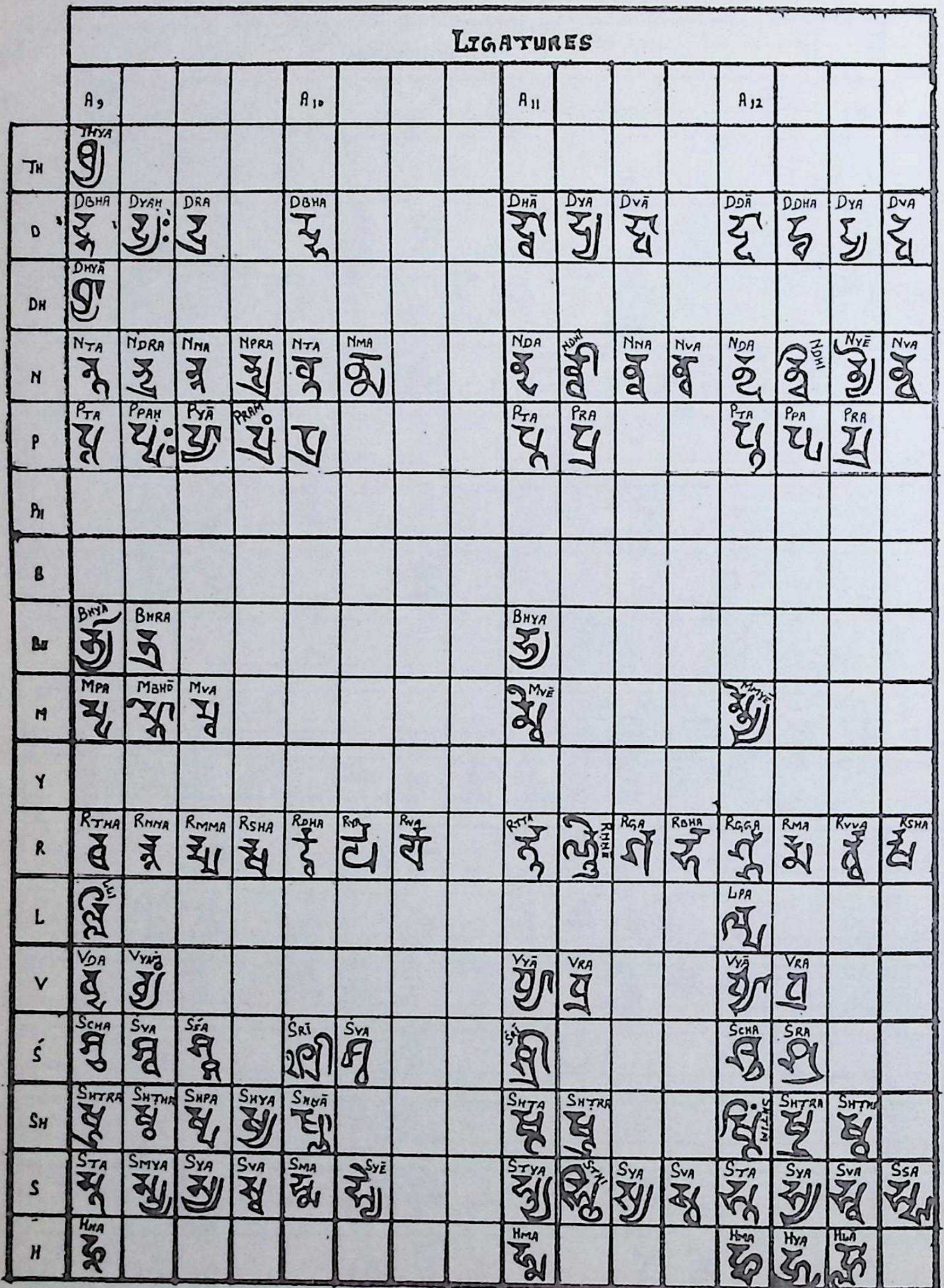

LIGATURES
A5
A6
A7
A8
TH
THYE
D
DDHA
DBHIḤ
DRA
DVI
DRA
DBHA
D
DDHA
DYŪ
DVI
DDA
DDHYA
DVĀṂ
DH
DHYA
N
NTA
NDA
NPRA
NYA
NDRA
NNA
NYE
NRĀ
NTA
NDRA
NDHYA
NMA
NTI
NDA
NNAḤ
P
PTA
PYA
PRA
PTA
PYA
PRA
PTA
PPA
PYA
PRA
PTA
PYA
PRA
PH
B
BRĀ
BDAṂ
BRA
BH
BHYĀ
BHRĀ
BHRĀ
BHRAṂ
M
MPĪ
MVA
MNĀ
MBHŌ
MYAI
MVA
MHĀ
MBI
MYA
MVŌ
Y
R
RJJ
RMMA
RYA
RSHA
RTTYĀ
RBRA
RMMA
RVVA
RGGĀ
RCHCHA
RTTA
RDDA
RGGA
RMMA
RYĀ
L
LYA
LVA
LPA
LYA
LPA
LLĀ
V
VYA
VRA
VYĀ
VYA
VRA
VYĀṂ
Ś
ŚCHA
ŚRA
ŚVA
ŚCHA
ŚRA
ŚVA
ŚŚĀ
ŚCHA
ŚRĪ
ŚVA
ŚŚA
ŚCHA
ŚMI
SYA
ŚRA
SH
SHṬA
SHṬHA
SHṆU
SHṬRI
SHṬHYĀ
SHVA
SHṬA
SHYA
SHṬHĀ
SHṆŌ
S
SKA
STA
STHĀ
SYA
STA
STHA
SYA
SSA
SKHA
STA
SMA
SVA
SMĀ
SYA
SVA
SSVA
H
HMA
HVRI
HMA
HMA
HME
HVAṂ

6th-8th CENTURY A.D. PLATE 27



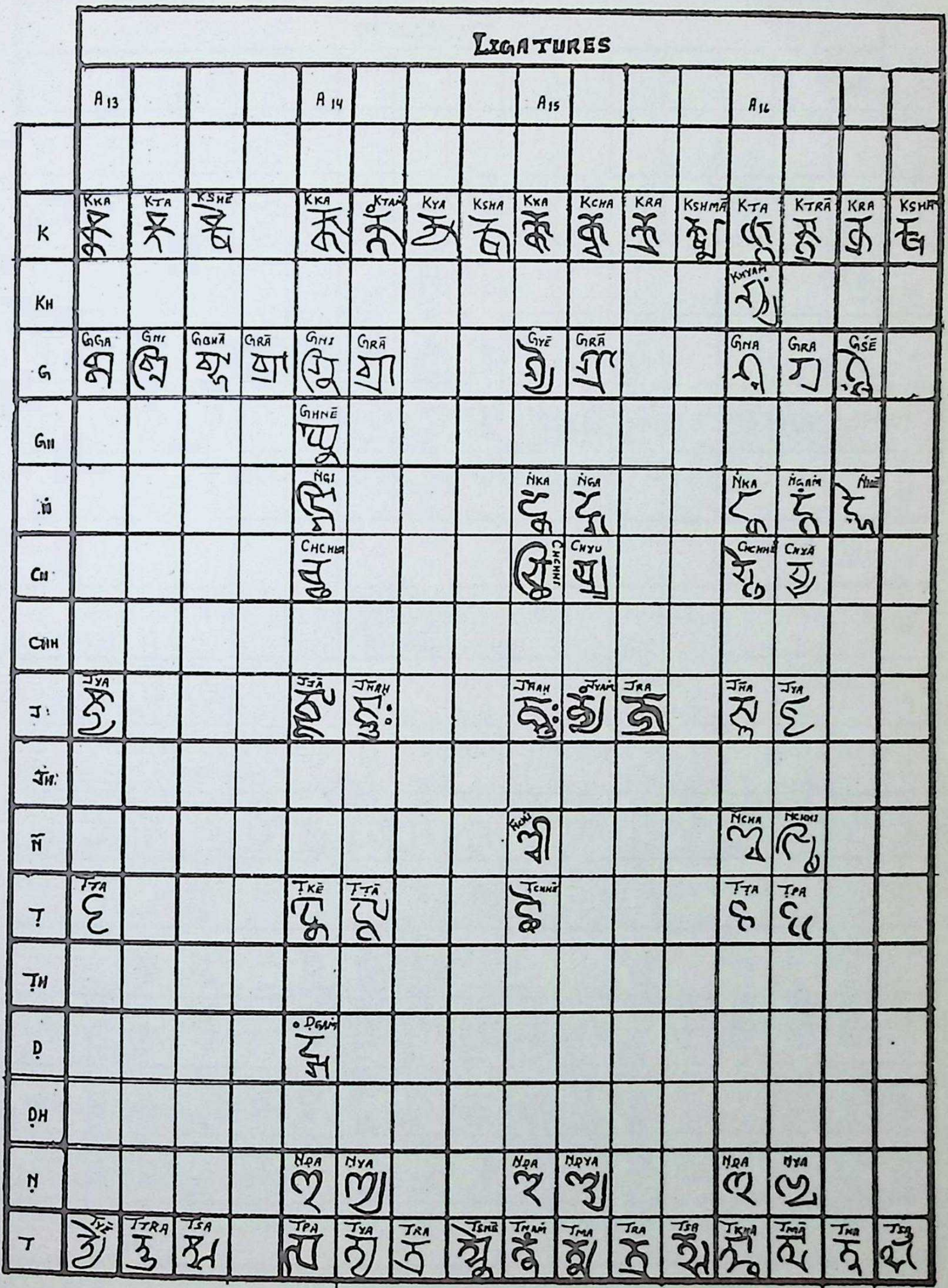
LIGATURES

	A9				A10				A11				A12			
K	KTA	KRA	KSHI	KSHYA	KSHI				KTI	KSHI			KTAṀ	KSHA		
KH	KHYĀ				KHYĀ											
G	GDHA	GMI	GRA	GVĀ					GRĀ				GDHĀ	GRA		
GH																
Ṅ	ṄKA	ṄKHA	ṄGA		ṄKA								ṄKA	ṄGYA		
CH	CHCHĀ	CHCHHA							CHCHHA				CHCHA	CHCHHĀ		
CHH																
J	JJI	JÑĀ	JYA	JVA	JÑI	JYA							JÑĀ			
JH																
Ñ	ÑCHA								ÑCHA	ÑJA			ÑCHA			
Ṭ	ṬṬĀ				ṬṬĀ				ṬṬA				ṬCHHĀ	ṬṬĀ		
ṬH																
Ḍ																
ḌH																
Ṇ	ṆṆA	ṆḌA			ṆYĒ				ṆḌA	ṆYĀ			ṆYA			
T	TTHAṀ	TMĀ	TYA	TVA	TRA				TTA	TMA			TPA	TMA	TRA	TSA

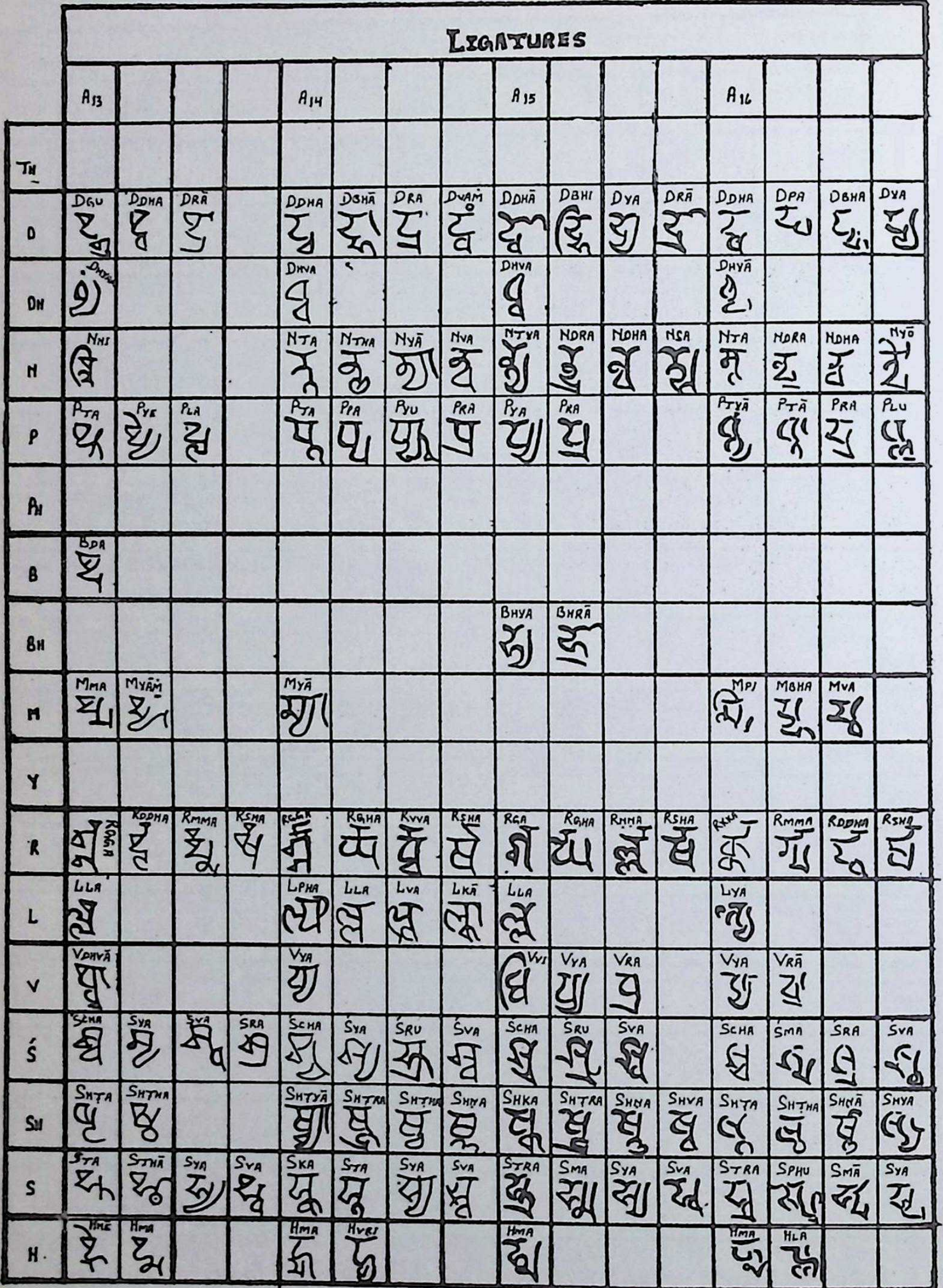


LIGATURES

	A9				A10				A11				A12			
TH	THYA															
D	DBHA	DYAḤ	DRA		DBHA				DHĀ	DYA	DVĀ		DDĀ	DDHA	DYA	DVA
DH	DHYĀ															
N	NTA	ṄDRA	NNA	NPRA	NTA	NMA			NDA	NDHI	NNA	NVA	NDA	NDHI	NYĒ	NVA
P	PTA	PPAḤ	PYĀ	PRAM					PTA	PRA			PTA	PPA	PRA	
PH																
B																
BH	BHYA	BHRA							BHYA							
M	MPA	MBHŌ	MVA						MVĒ				MMYĒ			
Y																
R	RTHA	RNNA	RMMA	RSHA	RDHA	RYA	RVA		RTTA	RNNI	RGA	RBHA	RGGA	RMA	RVVA	KSHA
L													LPA			
V	VDA	VYAṂ							VYĀ	VRA			VYĀ	VRA		
Ś	ŚCHA	ŚVA	ŚŚA		ŚRĪ	ŚVA			ŚRĪ				ŚCHA	ŚRA		
SH	SHTRA	SHṬHA	SHPA	SHYA	SHṆĀ				SHṬA	SHṬRA			SHṬMI	SHṬRA	SHṬH	
S	STA	SMYA	SYA	SVA	SMA	SYĒ			STYA	STHI	SYA	SVA	STA	SYA	SVA	SSA
H	HMA								HMA				HMA	HYA	HLA	



	LIGATURES															
	A13				A14				A15				A16			
K	KKA	KTA	KSHĒ		KKA	KTAṀ	KYA	KSHA	KKA	KCHA	KRA	KSHMĀ	KTA	KTRĀ	KRA	KSHA
KH													KHYAṀ			
G	GGA	GNI	GBHĀ	GRĀ	GNI	GRĀ			GYĒ	GRĀ			GNA	GRA	GŚĒ	
GH					GHNĒ											
Ṅ					ṄGI				ṄKA	ṄGA			ṄKA	ṄGAṀ	[illegible]	
CH					CHCHHA				CHCHHI	CHYU			CHCHHĒ	CHYĀ		
CHH																
J	JYA				JJĀ	JHAḤ			JHAḤ	JYAṀ	JRA		JÑA	JYA		
JH																
Ñ									ÑCHI				ÑCHA	ÑCHHI		
Ṭ	ṬṬA				ṬKĒ	ṬṬĀ			ṬCHHĒ				ṬṬA	ṬPA		
ṬH																
Ḍ					ḌGAṀ											
ḌH																
Ṇ					ṆḌA	ṆYA			ṆḌA	ṆḌYA			ṆḌA	ṆYA		
T	TYĒ	TTRA	TSA		TPA	TYA	TRA	TSMĒ	TMAṀ	TMA	TRA	TSA	TKHA	TMĀ	TNA	TSA



LIGATURES

	A13				A14				A15				A16			
TH																
D	DGU	DDHA	DRĀ		DDHA	DSHĀ	DRA	DVAṀ	DDHĀ	DBHI	DYA	DRĀ	DDHA	DPA	DBHA	DYA
DH	DHYA				DHVA				DHVA				DHYĀ			
N	NHI				NTA	NTHA	NYĀ	NVA	NTYA	NDRA	NDHA	NSA	NTA	NDRA	NDHA	NYŌ
P	PTA	PYE	PLA		PTA	PPA	PYU	PRA	PYA	PRA			PTYĀ	PTĀ	PRA	PLU
PH																
B	BDA															
BH									BHYA	BHRĀ						
M	MMA	MYĀM			MYĀ								MPI	MBHA	MVA	
Y																
R	RGGA	RDDHA	RMMA	RSHA	RGGA	RGHA	RVVA	RSHA	RGA	RGHA	RMMA	RSHA	RKKA	RMMA	RDDHA	RSHA
L	LLA				LPHA	LLA	LVA	LKĀ	LLA				LYA			
V	VDHVĀ				VYA				VVI	VYA	VRA		VYA	VRĀ		
Ś	ŚCHA	ŚYA	ŚVA	ŚRA	ŚCHA	ŚYA	ŚRU	ŚVA	ŚCHA	ŚRU	ŚVA		ŚCHA	ŚMA	ŚRA	ŚVA
SH	SHṬA	SHṬHA			SHṬYĀ	SHṬRA	SHṬHA	SHṆA	SHKA	SHṬRA	SHṆA	SHVA	SHṬA	SHṬHA	SHṆĀ	SHYA
S	STA	STHĀ	SYA	SVA	SKA	STA	SYA	SVA	STRA	SMA	SYA	SVA	STRA	SPHU	SMĀ	SYA
H	HME	HMA			HMA	HVRI			HMA				HMA	HLA		

3

The Period of Transition (9th–10th Century A.D.)

The sign-manual of Gūrjjara princes and the alphabet of Multāī Plates represent the early transitional phase of the Kuṭila script, which moves fast in this period. This is the period in which Kuṭila script completed its path of evolution and the characters of the subsequent period show a mature form of Nāgarī. The general course of the development of Nāgarī out of Kuṭila letters is clear enough, but the ascertainment of the actual period of transition is still puzzling. Palaeographers and historians have given suggestions about the fact, however, they are not unanimous on this point. For example, Om Prakash Bhatiya 'Araj'[1] accepts the actual period of transition in A.D. 1000, while Sukthankar[2] in the mid of the 9th, Bühler[3] in the 7th and Vasu[4] in the 5th century A.D. So, in these conditions of uncertainty it is necessary to make a thorough and minute palaeographical observation of the inscriptions of different regions and dynasties.

The Pālas of Bengal, Pratīhāras of Northern India and the Rāshṭrakūṭas of Gujarat and Maharashtra dominated the history of India during this period. Their writing differs somewhat from each other. In order to understand the development with differences, the script of the transitional period may be divided into three groups: Eastern, Northern and Western.

Eastern India

The regional style of writing in Eastern India maintained its originality at least up to the 8th century A.D. Subsequently, the trend was modified under the extraneous influences during the rule of the Pālas of Bengal and Bihar. With these changes, the proto-Nāgarī script of Western India for a long time obscured the evolution of the Gauḍī script. However, some letters still retain their distinguishing features which are elaborated in the succeeding paragraphs.

A_I. Inscriptions of Pālas

Table B_1 is taken from Nālandā and Mungir Plates of Devapāladeva (*c*. A.D. 810–50) and Table B_2 from the Gayā and Badāl inscriptions of Nārāyaṇapāla (A.D. 854–908). The lower end of letters turned less to the right in Mungir and Gayā epigraphs than Nālandā and Badāl. The alphabet of Badāl pillar inscription, which is in the East is more archaic than that of the Gayā inscription in the West.

Among initial vowels, the vertical line of *a* has a foot-mark with upwards (but optionally downwards also) extended lower left curve and slanted middle bar in Nālandā inscription while in Table B_2 middle bar becomes parallel. Initial *ā* has now a vertical line to the right of the letter to mark long *ā*. A different type of *ā* is found in Badāl inscription, which is the peculiarity of the region. Initial *i* shows a developing feature, formed by a short horizontal line at the top and two circles or dots below. Sometimes, a short vertical line is also attached to the horizontal line and lower two circles are formed on both sides of this vertical line (Table B_1). E has developed a tail (Pl. 45, B_1 & B_2). The rare initial *o* is of peculiar variety (Pl. 49, B_1) and *au* is formed by adding an upward curve to the right middle of initial *o* (Pl. 51, B_1).

Among consonants, right curve of the letter *ka* is prolonged. *Kha* is of two varieties—one with an inner triangular loop and the other is of eastern variety with an outer triangle and open mouth. *Gha* is on its way of development in which upper part comes closer and left curve raised above the level of the right one. *Cha* retains its beaked shape. The lowest arm of *ja* is further extended towards left. *Ṭa* is of two varieties in which eastern one prolongs its right hand tick downwards and left portion contains a semicircle with a slanting stroke by which it is attached to the left end of the top stroke. *Ṭha* is still of a plain circle type. The back of *ḍa* is curved and leg is bent. *Ṇa* is cursive as well as of open-mouthed variety. *Ta* is of curved type. *Tha* develops an outer loop at the upper portion in Table B_2. The breadth of *pa* is shortened. *Pha* shows a peculiar variety with its outwards turned loop. *Bha* and *sa* have opened their triangular foot-mark. With regular forms a peculiar variety of *śa* is found with its top curled and joined by a bar to the right vertical (Pl. 32, B_2). Perhaps this is the peculiarity of the region from which Bengālī form was derived later on. *Ha* has a developed tail in its left portion.

The ligatures *ksha, dya, nda, śrī* of Table B_2 are nearer to their Nāgarī forms. Subscript *ña* is of cursive variety while in superscript it is formed in full shape. Superscript *r* retains its triangular head-mark.

A vertical line to the right of the letter is the form of medial *ā*, except in the case of *ṭā* of Table B_1 which retains its older feature. The medials *i* and *ī* are extended up to the bottom of the letter. The medial *u* is of cursive as well as wedged vertical type. In the case of *ru* it is a downward hook from the middle of the letter. A leftward hook is added at the bottom of the letter for medial *ū*. The older style of putting the left vertical stroke still continues in the case of medials *e*, *ai*, *o* and *au*; but in a majority of cases new style of leftward slanting stroke is marked (Tables B_1 & B_2). Old form of *halanta* sign is retained in these inscriptions (Fig. 6). Optionally, the triangular form of top-stroke is found.

A_{II}. Inscriptions of Assam

Table B_4 is taken from Parbatiyā plates of Vanamālavarmadeva (A.D. 835–65). The head-mark is represented as a broad solid-triangle. Initial *a* and *u* show the regional influence. *I* is of archaic variety with its lower curve leftwards. *E* represents peculiar variety in which upper left portion is rounded and lower portion attached with the right vertical at its middle.

Among consonants, the left limb of *kha*, *ga* and *śa* bends inward at the middle and lower tip become cursive or rounded. *Gha* is of tailed variety. *Cha* retains its beaked shape. *Ṭa* is eastern double curved variety and *ṭha* is marked by a plain circle. *Ṇa* shows in both forms —cursive and open-mouthed. *Tha* represents archaic inner looped variety. In *pa*, the breadth of the letter is decreased. *Pha* has an outer loop at its upper instead of Pāla's side portion. *Bha* and *sa* have opened their mouths. *Ra* shows a developed tail. Left curl of *la* extends farther inwards. *Śa* takes the form of two circles one over the other at the left of the vertical in which the upper one is hollow. The tail of *ha* is attached with the right hook.

Ligatures are as usual. Superscript *ñ* is of cursive as well as of open-mouthed variety. Superscribed *l* takes its place to the left of the subscript like modern Nāgarī. The middle bar of the subscript *ja* of *raj* is prolonged and is on its way of developing into a vertical shape.

With the common vertical form of medial *ā*, the old curved form is also seen in *jā*, *ṭā* and *ṭhā*. Both forms of *u* are present. Medial *e* is unique, formed by extending the left end of the head-mark into a curve forming almost a loop at the end.

Further development is marked by the Nowgong Plates of Balavarmā (A.D. 885–910), shown in Table C_1. In the formation of letters cursive hand is adopted. The head-mark is represented by broad triangle, which optionally developed into a line form and cover the entire breadth of the letter. Lower curve of initial *i* is turned to right. *Au* is formed by adding an upward curve, turning to the left, in the middle of the initial *o*. The lower left limb of *kha* and *ga* develop in the direction of the Parbatiyā Plates (Table B_4). *Cha* is still of beaked variety; and middle bar of *ja* is yet to develop into straight vertical. *Ṭa* is of eastern type with two curves and a stroke at the right. *Ṭha* has no head-mark; and *ṇa* is of archaic open-mouthed variety. *Na* shows developed feature in which right portion became straight vertical and left loop meets with the vertical in the middle as in modern Nāgarī. Letters like *pa, ya, la, va* too developed into

Nāgarī forms. Sometimes, the upper portion of the letter *śa* shows an outer loop (Pl. 62, C_1), which is the real base of Nāgarī form.

Among ligatures superscript *ñ* is noteworthy and shows the local form. The upper curve of subscript *ṭa* is extended. Medial signs are usual as in Parbatiyā Plates. Along with the new form of *halanta* sign old one is also employed (Fig. 6).

A_{III}. Inscriptions of Orissa

Table B_5 is taken from Peṭṭasar Grant of Netabhañja (A.D. 885) and Narasiṅgpur Plate of Devānandadeva . The alphabet of this region shows a more cursive form and solid triangle of the left limb of *kha*, *ga* and *śa* have their mouths open. Presumably, it is due to the writing technique of the region in which while writing with a stylus of solid triangular shape, it is not easy to draw.

The lower curve of initial *a* is bent downwards and middle bar is slanted. The lower curve of initial *i* turns downwards. *U* is of Nāgarī type and *e* has a rounded top. The right curve of the letter *ka* is further extended with a rightwards bend. *Kha* has opened its mouth as in eastern style. *Chha* is on its way of development. The middle arm of *ja* is developing into straight vertical form. *Ṇa* shows developed cursive variety. *Pha* has an outer loop on the right limb like Assam inscriptions. *Bha* and *sa* are of open-mouthed variety. *Śa* retains its eastern style. Lower limb of the vertical lines are bent to the right. These inscriptions represent short line head-mark which do not cover the entire breadth of the letters.

Among ligatures *ṭṭa* is interesting in which both *ṭa* are placed separately side by side with the left one slightly at upper level. In *ṇṭa* and *shṭiṁ*, the subscript *ṭa* opens mouth downwards in eastern style. The middle bar of the superscript *sh* starts from the head-mark in a curly shape to meet with the right vertical in the middle. Medial signs do not maintain uniformity throughout the inscriptions as they are a mixture of older and newer forms.

The further developments are shown in Tables C_2 and C_3, respectively derived from the Bālangir Museum Plates of Mahāśivagupta I Yayātī and

Chicācole Plates of Madhu-Kāvāmṇadeva (A.D. 923). Chicācole Plates belong to Andhra; however, its alphabet shows the influence of Orissa. The lower left limb of the letters *kha*, *ga* and *śa* represents open-triangular mark like the earlier style of the region. Initial *e* of Table C_3 opens its mouth to left, which later on became the common characteristics of the eastern script. *Ṭa* and *śa* followed the style of eastern region. The lower extremity of *ḍa* is turned to left. *Ṇa* extends its right limb upwards. The upper outer loop of *tha* is still in the form of a hook. The upper right loop of *pha* is developing into a hooked shape, which was later on accepted in the eastern style. *Ha* has a developed tail in its left portion. The top-strokes still do not cover regularly the entire breadth of the whole letter. Ligature *kshe* of Table C_2 shows the transitional form. Superscribed *ṅ* in Table C_3 has a dot or circle at the right tip of the upper horizontal line. This may be regarded as the precursor of modern Nāgarī *ṅa* with a dot at the right side of the letter. It is also to be found in the inscriptions of Nārāyaṇapāla of Bihar (Pl. 53, B_2). Ñ is of eastern variety. Among medial signs noticeable form is *e* which is generally formed by adding a line in the left portion of the letter as it is found in eastern scripts.

General Remarks

The observations attested that the inscriptions of Eastern India do not show regular full covering head-mark. The alphabet is progressing towards local scripts, however, the influence of proto-Nāgarī is still retained in many forms; Nālandā and Mungir inscriptions are marked by proto-Nāgarī than any other influence. The Bengālī, Assamese and Oriyā scripts are still in the process of evolution during this period.

North India

In North India Pratīhāras established an extensive empire. Two important cultural territories —Kānyakubja and Mālava—were under them. As a consequence, the writing style of the region was much developed and influenced the scripts of eastern India and penetrated into the western regions.

B_I. Inscriptions of Pratihāras

For the purpose of showing the development of alphabets during 9th Cent. A.D., the Barāh copper plate (Kanpur, U.P.) and Sāgar-Tāl inscription (Gwalior, M.P.) of Bhojadeva; Dighwā-Dubaulī plate (Saran, Bihar) and Pehevā inscription (Karnal, E. Punjab) of Mahendrapāla were selected and illustrated in Tables B_6, B_{10}, B_3 and B_8. On the basis of the narrow *cha*, cursive *ja*, later *ṭa*, proto-Bengālī *tha*, looped *ma*, transitional *śa*, late *sha*; and exceptional forms of *a*, *kha*, *gha*, *ta*, *ṇa* and *na* Banerji[5] admits that Dighwā-Dubaulī grant shows the use of an alphabet which is a mixture of eastern and western varieties. However, the mentioned peculiarities are also met with in the corresponding letter forms of Barāh Plate. So, these peculiarities may not be due to the mixture of eastern and western but was the common simplified style of copper plate writing of that period.

Of these inscriptions, Sāgar-Tāl is similar to the Pehevā. Both are engraved on stone and still have a touch of flourish, Kuṭila forms and triangular head-mark. Barāh plate resembles the Dighwā-Dubaulī plate. Both are Copper–plates and show only simple forms of letters and line forms of head-mark.

Table B_{10} (Sāgar-Tāl) shows a peculiar type of initial *a* in which right portion is a wedged vertical line and left has an outward curve with triangular head-mark and slanting bar in the lower portion attached to the vertical line. *Ā* of Table B_6 (Barāh Plate). represents an archaic form with a curve at the bottom while a developed vertical form added to the right of *a* in Table B_3 (Dighwā-Dubaulī) and B_8 (Pehevā). Initial *i* is of archaic variety with leftward lower curve, however, in Pehevā epigraph lower curve turns downwards and a slanted bar is added to the lower limb of the curve. Except in Sāgar-Tāl, initial vowel *e* shows the developed variety with tail.

The Sāgar-Tāl inscription invariably bears Kuṭila forms of letters in which only some letters have a short tail while most of the letters of other inscriptions show developed form of the long tail. The right curve of the letter *ka* is prolonged. The left limb of the letter *kha* in *khi* (Pl. 35, B_3)

shows a developed tail, which looks Nāgarī in form. Letter *gha* of this region retains archaic tripartite feature; and except Pehevā inscription, *ṇa* is generally of open-mouthed variety. *Ta* shows two forms: one with the two arms rounded and the other with the left arm forming an angular hook and finally joining with the right vertical. *Tha* has an outer loop. *Na* is of modern vertical as well as of archaic curved form . The breadth of *pa* is reduced. *Pha* of Table B_{10} looks like the letter *ḍha*. *Bha* and *sa* have their mouths open in Copper–plates while the stone inscriptions show a process of developing the modern Nāgarī tailed form. The left loop of *ma* was common in this period. *Ra* is of well developed cursive tailed variety. *Va*, when triangular, has slanted base; and when rounded, bends right vertical. Both forms of *śa*, looped and round topped, are present. The middle bar of *sha* in the stone inscriptions is in the shape of horizontal bar while it is slanting in the Copper-plates.

The ligatures are still formed by placing the consonants one upon the other. Subscripts right verticals extend up to the top of the letters. Superscribed *b* of Table B_3 is represented by a distinguishing sign while generally it is denoted by the sign of *va*. Superscript *r* of *rma* in Table B_8 shows the modern shape.

Generally, medial *ā* is denoted by a short vertical line in the stone inscriptions and long vertical line in the Copper–plates. In the case of *ṇā*, old upward cursive form is still present. The cursive type of *u* is more common. However, the use of vertical wedged form may be also seen in Table B_8. In the case of the medials *e*, *ai*, *o* and *au*; the older style of the left horizontal stroke is more frequently employed in the Copper–plates. The ornate style survives in the medial signs of stone inscriptions.

Ojha[6] noticed Dighwā-Dubaulī inscription as the first epigraph of Nāgarī script. However, the alphabets do not follow the full covering head-line, like an *a*, *gha*, *pa*, *ma*, etc. and the sporadic use of acute-angles, such as in *ma*, entitle to be considered as an inscription of the transitional phase.

The further evolution during 10th century A.D. are represented in Tables C_4 and C_6 which have been taken from the Bengāl Asiatic Society's plate of Vināyakapāla (A.D. 931)[7] and Bharat Kala Bhavan plate of Harirāja (A.D. 983).[8] Bühler[9] is of the view that in Northern and Central India, Nāgarī appears first on the Copper-plate of the Mahārāja Vināyakapāla of Mahodaya. But, it may be seen in Table C_4 that the head-mark is a broad triangle or wedge which does not cover, optionally, the letter *ma*, *ya*, *sa*; base of the letter *pa*, *ma* is slanted; and lower limb of the vertical line turns rightwards. In the formation of the ligatures old pattern is adopted.

In the observation of the Bharat Kala Bhavan plate it may be noticed that the plate is engraved in a simple style. Head-mark is in line form which regularly covers the full breadth of the letters. Even on the top of *ṭha* and *ṇa*, head-mark is formed. Right verticals show a straight line form. Most of the ligatures represent a process of following the pattern of modern rule, conjuncting side by side. Except *e*, medial signs have uniformity throughout and attain modern shapes. As far the development of letters is concerned, *ka, kha, ga, ta tha, da, na, pa, ya, ra, la, va* and *ha* have taken Nāgarī shapes; and *gha, cha, ja, ṭha, ṇa, pha, śa, sha, sa*, etc., are nearer to the modern form. On the whole, the characteristics of the alphabet entitle Bharat Kala Bhavan plate to be considered as the inscription of Nāgarī.

B_{II}. Table B_7 is taken from the Pāṇḍukeśvar (Garhwal, U.P.) Plate of Lalitāsuradeva (A.D. 854) to represent the development of script in the inscription of the local ruler. Barāh Plate of Bhojadeva (A.D. 836) is also found from U.P., however, there is a remarkable difference in the alphabets of these two inscriptions. In the Barāh Plate (Table B_6), head-mark is denoted by a small line while in the present inscription a solid-triangle is formed and tail is small. The Kuṭila features are prominent in the present inscription. *Kha* is of open-mouthed variety like in eastern style. *Ṭa* and *ṭha* are without top-mark. *Ṇa* shows open-mouthed form with sloppy base. *Tha* is of peculiar variety with an added right vertical. *Na* is denoted by archaic broad looped form and *la* has an outer bend at the lower extremity of the left curve. Medial *ā* is formed by attaching a triangular or short line instead of full perpendicular line. Medial *u* is of many types, such as wedged vertical, hollow triangular, cursive, or rightwards extended form.

B_{III}. Table B_9 is illustrated from the Kāritalāī Stone inscription of Lakshmaṇarāja I (A.D. 840–41) and Table C_8 from the Kāritalāī inscription of Lakshmaṇarāja II (A.D. 945–70) to show the evolution in the Kalachuri alphabet. The head-mark of Table B_9 is in triangular form which is broader and covers the tops of some letter in Table C_8. The letter *ga* of Table B_9 looks like *rā*. Left limb of *kha* still shows triangular foot-mark. *Gha* shows a process of developing modern features. *Ṇa* retains open-mouthed shape and *ta* is of curved variety. The upper left limb of *dha* bends leftwards in order to form a horn like later shape. *Bha* and *sa* are of wedged variety in Table B_9 and with mouths open in Table C_8.

The stroke of the medial signs in Table B_9 have here and there been ornamentally treated and much elongated in serpentine form. The medials of Table C_8 are of simple variety but still they are not uniform.

B_{IV}. Table C_5 is taken from Dewal (Pilibhit, U.P.) Praśasti of Lalla (A.D. 992). J. Princep[10] termed the alphabet of this inscription as the Kuṭila alphabet while Bühler[11] puts it into the group of North Indian Nāgarī. The palaeography shows some peculiarities which may be due to the writer and engraver, the former, belonged to Gauḍadeśa and the latter from Kānyakubja.[12] The inscription itself refers to the writer as "*Kuṭilāksharāṇi Vidushā*," 'well versed in writing Kuṭila letters'.

The head-mark is a solid triangle or wedge, which sometimes becomes broader or develops into line form. The initial vowel *a* shows a foot-mark and *e* is without a tail. Among consonants, *kha*, *ga* and *śa* have a hollow triangle in the left limb. *Gha* is still of three armed variety. Lower curve of *ḍa* in *ḍā* prolongs leftward in modern Nāgarī style. *Dha* extends upwards its right vertical. The right curve of *na* and the middle bar of *ma* start from the upper portion and the left loop of both letters are open. The archaism may be seen in three full armed *gha*, headless *ṭha*, open-mouthed *ṇa* and tailless *ha*.

B$_V$. The characteristics of the Chandella alphabet are shown in Table C$_7$, taken from the Khajurāho inscription of Yaśovarmā (A.D. 954). In the formation of the letter and medial sign taste of ornamentation may be seen. The head-mark is represented by broad-wedge shape and lower portion further extends into a rightward curve. Initial *a* is developing in the direction of modern Nāgarī. Lower rightward curve of *i* bends downwards with a stroke to the left like that in Pehevā Inscription (Table B$_8$). *U* is without head-mark. *E* shows a developed tail and looks Nāgarī in form.

Among consonants, the tail is well marked in every letter. Even an unusual tail is seen in the left limb of *bha*. *Gha* retains three arms and *ṇa* is of open-mouthed variety. *Pha* has a peculiar shape, nearer to the same letter in Dewal Praśasti of Lalla the Chhinda (Table C$_5$). Ligature approaches the modern Nāgarī style. The medial *ā* is generally formed by a vertical line, while in *ṭā* hooked or cursive form is still present. Both forms, wedged and cursive, are employed for medial *u*. *E* is formed with a top stroke as well as with a vertical line at the left.

B$_{VI}$. The Mālava Copper-plate of Vākpatirāja (A.D. 974) and Harsol (Ahmedabad, Gujarāt) Grants of Sīyaka (A.D. 948) are selected and illustrated in Tables C$_9$ & C$_{13}$; to represent the characteristics of Paramaāra alphabet. The head-mark is a broad-wedge in Table C$_9$ and line or notched form in Table C$_{13}$. The forms of the letters in Mālava plate are bold type in the forming of which cursive hand is adopted. Lower extremity of the letters is further extended to the right. Initial *a* shows a foot-mark; the curves of *a*, *e* and *u* prolong upwards. However, initial *a* of Table C$_{13}$ bears no foot-mark; tail is yet to develop in *e*; the loop of *pha* transforms into a curve and is placed to the right of the straight vertical line. Most of the letters show developed forms.

In the formation of ligature, modern features may be seen. *Ksha* shows almost the modern form. Superscript *ṅ* is without a dot. Subscript *chha* is of the oval variety with a tail; *ṭa* shows an additional stroke to the right of the letter. Superscript *s* and ligature *tsa* of Table C_9 represent the modern features.

Medials are of fully developed variety. However, variations may be seen in the form of *ā* of Table C_{13}—full perpendicular, short stroke and cursive form. Medial *e* also is of both types.

B_{VII}. Table C_{10} is taken from the Śaraṇeśvara (Udaipur, Rajasthan) Temple Inscription of Guhil King Allaṭ (A.D. 953). The head-mark is a mixture of triangular and line form. Generally, the vertical line is straight. Initial vowels have no remarkable development. Among consonants, both limbs of letter *ka* hang from the head-line or simply touch it. Developing forms of *gha* and *cha* have a tail, *ṭa* bears a head-mark, *ṇa* is of cursive variety and *ba* is shown by a separate sign. However, left limb of *kha* retains a triangular shape, lower arm of *ja* is not prolonged into leftward curve, *dha* is still of bulgy type and *na* is of broad looped variety. In the formation of medial *e* continuity of the ornate style may be noticed.

B_{VIII}. Table C_{11} is derived from Harsha (Rajasthan) Inscription of Chāhamāna Vigraharāja (A.D. 973). The vertical line is almost straight; head-mark is represented by broad wedged shape and rarely covers the entire breadth of the letter. Rare initial *au* is of peculiar variety, formed by adding a vertical line with a horizontal bar to the form of initial *o*. The left limbs of *kha*, *ga* and *śa* show hollow triangled foot-mark. *Gha* is in a developing process. *Chha* is of peculiar type in which right loop is detached from the left one and shows one step ahead from contemporary signs to take the form of modern Nāgarī. Middle bar of *ja* is extended. Headline of *ṭa* becomes a regular feature. Middle bar of *la* is short and parallel to the head-mark. The lower left limb of *sa* is growing into the modern tail form. But *ṭha* is still without head-mark, *na* is to develop vertical form and *ha* is without a tail. In the formation of medial *e*, the use of ornate double curved form may be seen. Medial *au* is represented by superscribed two horned and a vertical line form in *gau*.

B_{IX}. Table C_{12} is taken from the Bālerā (Sāñchor, Rajasthan) Plates of Chālukya Mūlarāja I. Generally, the head-mark is in notched shape, formed by two curved strokes. The lower extremity of the letters further prolongs to the right. The left limb of *kha* shows a process of developing the tail and the inner loop of right portion becomes rounded. Both lower arms of *ja* are further extended. Lower limb of *ḍa* is on its way of developing into a leftward curve shape. The right limb of *ta* is developing into vertical shape. *Na* approaches modern feature with right vertical and downwards open left loop. *Ha* has a developed tail in left limb. *Bha* and *sa* are of open-mouthed variety. In ligatures, superscript *r* shows the modern cursive form. Medial *e* is formed by superscript sign as well as perpendicular line.

General Remarks

In reviewing of the palaeography of the region as a whole, it may be observed that from the viewpoint of development most of the letters reveal modern characters. In the formation of ligatures the consonants come side by side in which the first letter loses inherent *a* and is mutilated in order to combine with the other letter. Medial signs are also standardized and modern form of *halanta* sign is employed. But verticals are generally bent to the right and head-mark always do not cover the full breadth of the letter. However, it can be said that the Bharat Kala Bhavan Plate of Harirāja contains more advanced forms from this point of view and may be treated as the first, or the earliest dated record of Nāgarī.

Western India and the Deccan

Rāshṭrakūṭas of Western India were the strongest and most victorious rulers of that region. They conquered not only the Pratīhāras but also the Pālas of Bengal. Notwithstanding the influence of the cultural activities of Northern India they were bound to use the script of that region in incising inscriptions. The credit for popularising the proto-Nāgarī of North in Western India goes to the Rāsnṭrakūṭas.

C_I. Inscriptions of Rāshṭrakūṭas

I have selected Gujarāt Plates of Dantivarmā of A.D. 867 (Table B_{11}), Bagumrā Plates of Kṛishṇa II of A.D. 888 (Table B_{12}) from Gujarat region;

and Dharur Plates of Govinda III of A.D. 806 (Table B_{13}), Javakheḍ Plates of Amoghavarsha I of A.D. 820 (Table B_{14}), Sañjāṇ Plates of Amoghavarsha I of A.D. 871 (Table B_{16}) from the Maharashtra region to represent developments during 9th century A.D.

Head-mark is in short line form and it does not always cover the full top of the letter. Initial *a* of Table B_{11} shows a foot-mark while in other inscriptions it is not present. In the formation of *ā*, in the Gujarat region a full perpendicular line is added to the right of the initial *a* while in Maharashtra only a slanting stroke to the middle of the vertical line is formed. The roofed variety of initial *i* is seen in Gujarat epigraphs whereas the old form is retained in Maharashtra. *E* of Gujarat region reveals a fully developed form.

The right limb of the letter *ka* in Gujarat prolongs rightwards. The left limb tail in *kha* still persists and the right portion shows many varieties like inner triangular, inner rounded and outer opened triangular shape. *Gha* of Gujarāt and Sañjāṇ Plates is on its way to development. The other two inscriptions reveal the archaic form of three armed *gha*. The three armed *ja* is still retained in Maharashtra while in other parts only the transitional form of the letter is employed. *Ṭa* of Gujarat shows modern form whereas it is on its way to development in Maharashtra. *Ṭha* is denoted by a plain circle. *Ṇa* of both regions is only in cursive form while in other regions open-mouthed variety of the letter is also employed. *Tha* is of developed variety in which only the top-stroke is needed. Table B_{14} shows a peculiar inner curve or loop in the form of *tha*. *Na* shows only the cursive form of the looped variety. The breadth of *pa* is reduced. *Pha* is of two types—one with inner loop and other with outer loop. The open-mouthed type of *bha* is common, but in Gujarāt Plate a wedged form of the letter may be noticed. The letter *lā* of Table B_{11} shows a process of developing into the Marāṭhī *ḷā*. The letter *śa* is of many varieties in which modern form of the letter can also be noticed (Pls. 34, B_{11}; 40, 46, 50, B_{14}). Generally, *sa* is of open mouthed variety. Table B_{12} shows full developed form of modern *ha* (Pl. 32).

In ligatures curved form of *k* still persists. *Khyā* of Table B_{11} is of modern type. *Gma* of Table B_{14} is formed side by side. Superscript *ṅ* of Maharashtra is still in two armed form while in other regions upper arm merges in the head-mark. *Jña* of Table B_{12} is peculiar. Superscript *ñ* of Table B_{14} shows both forms—cursive and full. Conjunction with the initial letter *t* shows the use of modern practice. Superscript *s* of Table B_{11} approaches the modern form. *Rya* of Table B_{11} (Pl. 58) shows the old pattern of conjuncting the full form of the letters which is peculiar in formation.

Medial *ā* is generally shown in long vertical form and optionally in cursive form (cf. *jā*, *ṭā*, *ṇā*, Pl. 33). The medial *u* of Table B_{11} is in wedged shape while in general cursive form is employed. For *e* more than one form is used in which top-stroke variety is more common. In other forms, Table B_{11} shows a full extended line to the left of the letter. Inscriptions of Maharashtra reveal the use of a hook to the left top.

The evolution of alphabets during the 10th century A.D. is recorded in Tables C_{14} and C_{15}; derived respectively from the Bagumrā Plates of Indrarāja III (A.D. 914) and Deoli Plates of Kṛishṇa III (A.D. 940). In this period the head mark developed into full covering line. Letters have a rightwards bend at the lower extremity. The initial *a* is of two varietes, representing modern features. *Ā* of Table C_{14} shows archaism in joining stroke to the middle of the vertical line. *I* of Table C_{15} shows an additional stroke in the lower portion. *E* is yet to develop a long tail. The use of archaic curved form of *ka* may be seen in *kṛi* (Pl. 73) and ligatures (Pl. 89). The left limbs of the letters *kha*, *ga* and *śa* show a hollow triangular loop. Sometimes, the right portion of the letter *kha* is in the form of an outer loop with open mouth like eastern India. The letter *gha* shows a process of development, the full middle arm of Table C_{14} is reduced into a tick in Table C_{15} (Pl. 61). *Chha* is of the oval variety with a tail. The lower arm of *ja* is short in Table C_{14}, but in the other inscription it has taken an elegant cursive feature and middle bar is in the process of taking vertical shape. *Ṭha* is yet to develop the head-mark. Lower limb of *ḍa* is on the way of developing into a leftward bend. The vertical form of *ta* and *na* may be seen in Table C_{14}. *Pa* attains modern Nāgarī form. In the outer looped type of *pha* head-mark disappears. The mouth of *bha* and *sa* are opened. The looped form of *śa* shows many varieties. *Ha* has developed a tail.

In ligature superscript *ñ* is in full form. Subscript *ṭa* mouth opens to the right. Superscript *ś* of *ścha*, with an outer loop and slanted foot-mark, is reaching nearer to the modern form. Ligatures are generally formed by conjunction of one consonant upon the other.

With general perpendicular line the cursive form of medial *ā* is also noticed in *ṭā*. The vertical type *e* is more common. Other two forms are side stroke or hooked and top-stroke. In *śu* of Table C_{15}, a slanting stroke is added to the right vertical of the letter for denoting medial *u*.

C_{II}. Inscriptions of Śilāhāras

Table B_{15} is taken from three Kanherī Cave Inscriptions of Pullaśakti and Kāpardi II (A.D. 843, 853 & 877). These inscriptions are in a mutilated condition and eye copies of Mirashi are unsatisfactory from the veiwpoint of palaeography. But one can not afford to leave these inscriptions because earlier epigraphers like Sukthankar[13] considered them the first Nāgarī inscriptions.

The head-mark is in the line form, but it may be marked that the entire breadth of the letter is not always covered by it. Ligatures are formed in old style by conjuncting one upon the other. Medial *ā* is denoted by long or short vertical line, or cursive form. Medial *u* is generally of wedged type and occasionally cursive. Both forms of *e* are present.

As far as the development of an alphabet is concerned these inscriptions reveal the advanced forms of letters. Initial *a* and *ā* have attained modern shapes. *I* is of roofted variety. Generally, the left limbs of *kha*, *ga* and *śa* show a triangular loop. *Gha* retains three arms. The lower arm of *ja* does not show developed curve. *Ta* is still of double curved form.

Left curve of *va* becomes rounded. *Ha* has developed a tail. Base of the letters like *cha*, *pa*, *ma* and *sha* are slanted.

The development of 10th century A.D. is illustrated in Table C_{16}, taken from the Janjirā Plates of Aparājita (A.D. 993). The head-mark covers the whole letter. Initial *a* bears a triangular foot-mark while the Rāshṭrakūṭa inscriptions of the same region, optionally, show only a stroke type of addition in the vertical line. The left limb of e is also straight instead of curved. The left limbs of *kha*, *ga* and *śa* still retain triangular loop. *Gha* shows a step further from the point of view to approach the Nāgarī form. Middle bar of *ja* becomes almost vertical and lower portion is curved in an artistic manner. The rare *jha* is also employed. *Ta* and *na* are of developed vertical form. *Pha* shows a distinct feature with an addition of a stroke to the lower portion of the loop. The base of the letters become parallel to the head-mark. Left portion of *va* shows an elegant rounded form in the place of curve, or triangle. *Ha* has only a short tail.

Ligatures are of the developing type in which superscript *ṅ* is still without a dot and subscript *chha* is of oval variety. *Dya* looks modern in character. Superscript *r* is in modern curved form. The right vertical type of subscript is conjuncting with the right limb of initial letter *h* while in other type joins with the left limb. Medial signs are usual, as in that time.

General Remarks

On the whole, the above palaeographical observation reveals that even the western inscriptions of 10th century A.D. retain ornamentation in twisting the letter and straight vertical is yet to be formed. Most of the head-marks do not entirely cover the letters. The use of the archaic as well as the advanced forms of letters would indicate that the alphabet employed in the inscriptions was in transition and under the influence of the local style.

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(9th Century)

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B_2	Gayā inscription of Nārāyaṇapāla	—	*EI*, XXXV, Pl. f. p:, 228.
	Badāl inscription of Nārāyaṇapāla	—	*EI*, II, Pl. f. p., 160.
B_3	Dighwā-Dubaulī plate of Mahendrapāla	898	*IA*, XV, Pl. f. p., 112.
B_4	Parbatiyā plates of Vanamālavarmā	—	*EI*, XXIX, Pls. b. pp. 154–55.
B_5	Peṭṭasar grant of Netabhañja	885	*EI*, XXVII, Pls. b. pp. 338–39.
B_6	Barāh plate of Bhoja	836	*EI*, XIX, Pl. f. p., 18.
B_7	Pāṇḍukeśvar plate of Lalitaśūra	854	*EI*, XXXI, Pl. f. p., 280.
B_8	Pehevā inscription of Mahendrapāla	—	*EI*, I, Pl. f. p., 244.
B_9	Kāritalāi inscription of Lakshmaṇa	840	*CII*, IV, Pl. XXXA

B_{10}	Sāgar-Tāl inscription of Bhoja	—	*ASI*, *AR*, 1903–04, Pl. f. p., 280.
B_{11}	Gujarāt plates of Dantivarmā	867	*EI*, VI, Pls. b. pp. 290–91 & f. p., 294.
B_{12}	Bagumrā plates of Kṛishṇa II	888	*IA*, XIII, Pls. b. pp. 65 & 68.
B_{13}	Dharur plates of Govinda III	806	*EI*, XXXVI, Pls. b. pp. 292–93.
B_{14}	Javakheḍ plates of Amoghavarsha I	820	*EI*, XXXII,, Pls. b. pp. 130–31, & 132–33.
B_{15}	Kanherī cave inscription of Pullaśakti	843	*CII*, VI, Pls. I & II.
	Kanherī Cave inscription of Kāpardi II	853	*CII*, VI, Pls. III & IV.
	Kanherī cave inscription of Kāpardi II	877	*CII*, VI, Pls. V & VI.
B_{16}	Sañjāṇ Plates of Amoghavarsha I	871	*EI*, XVIII, Pls. b. pp. 248–49.

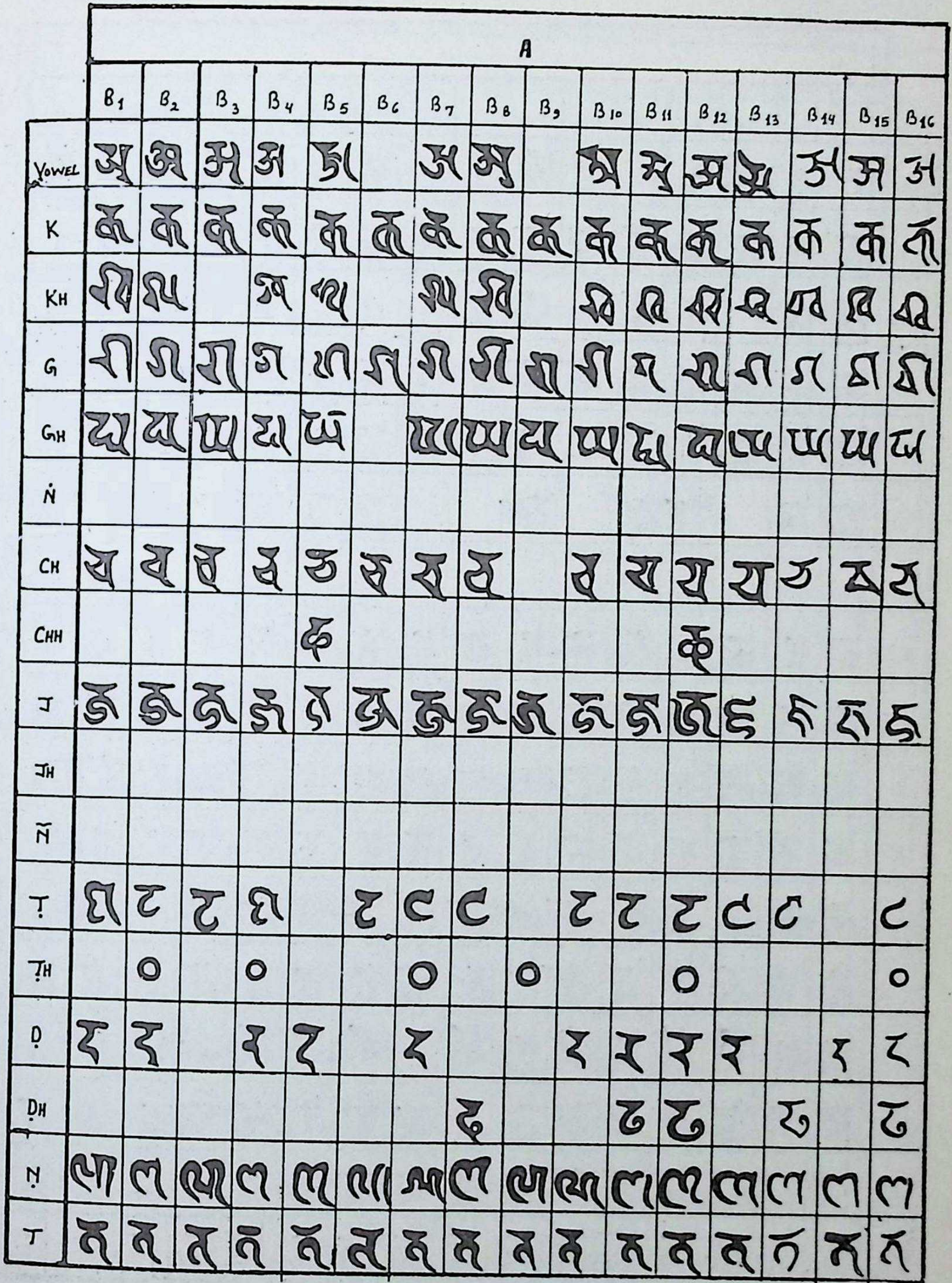
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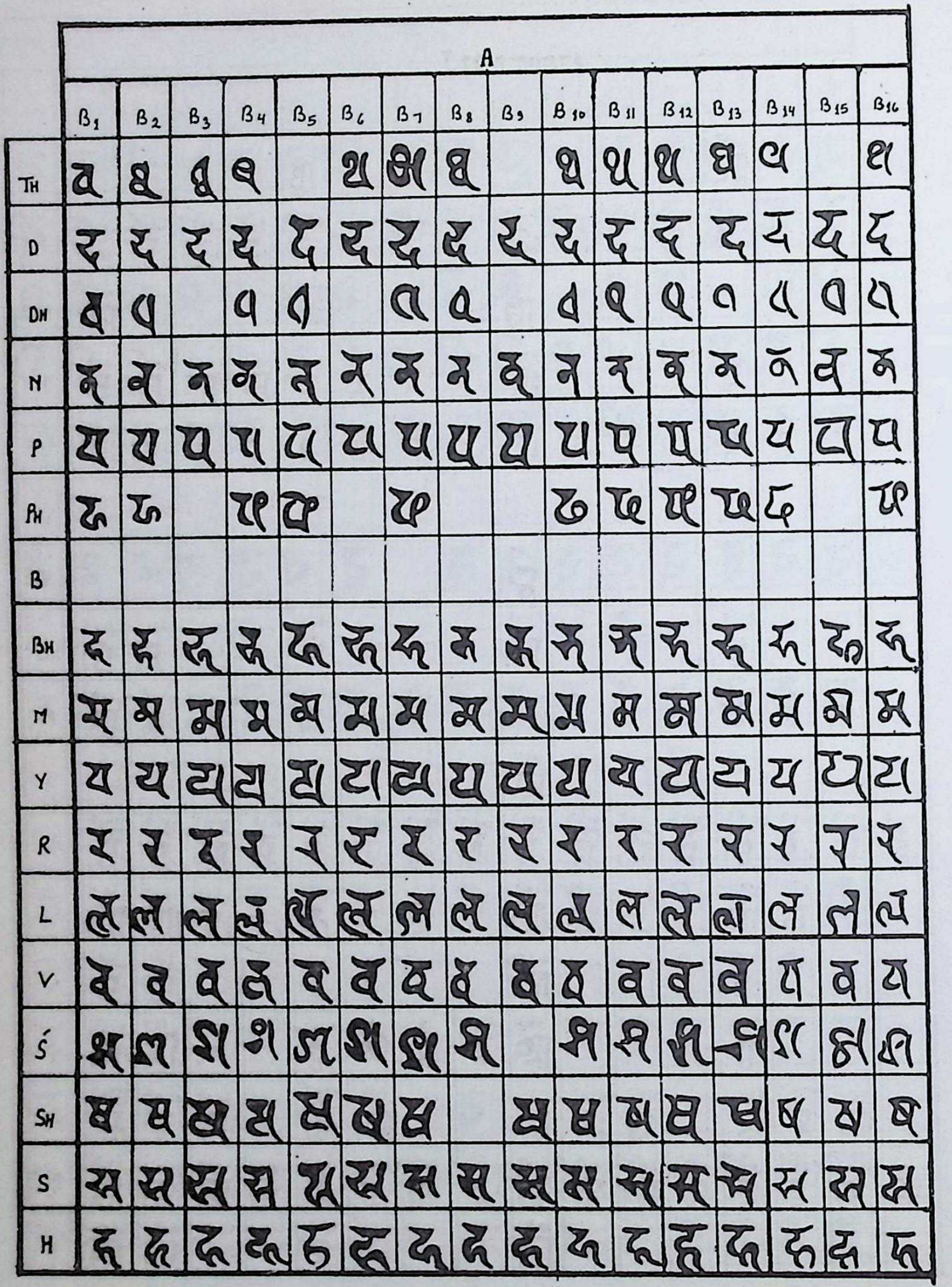
PLATE 32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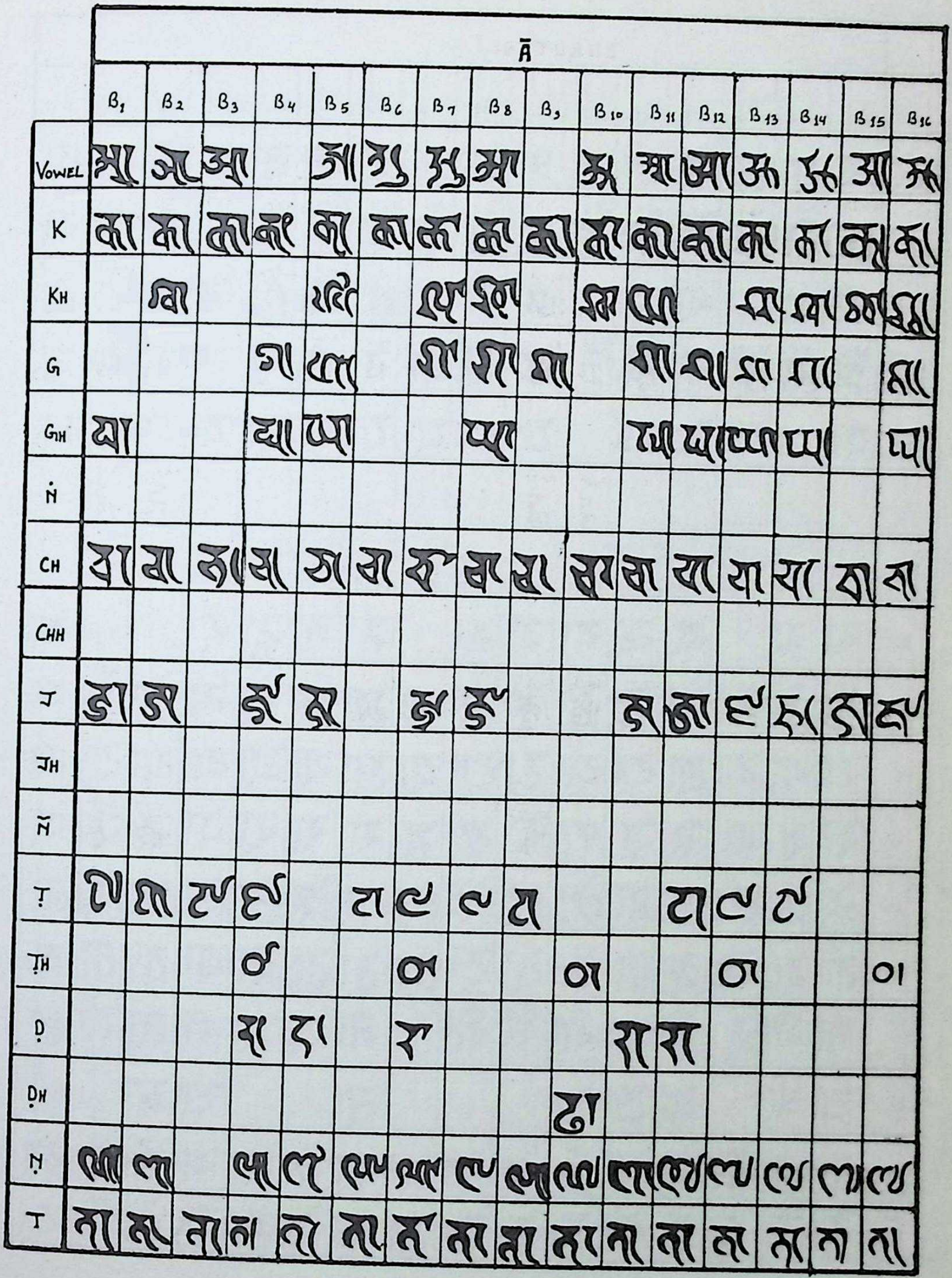
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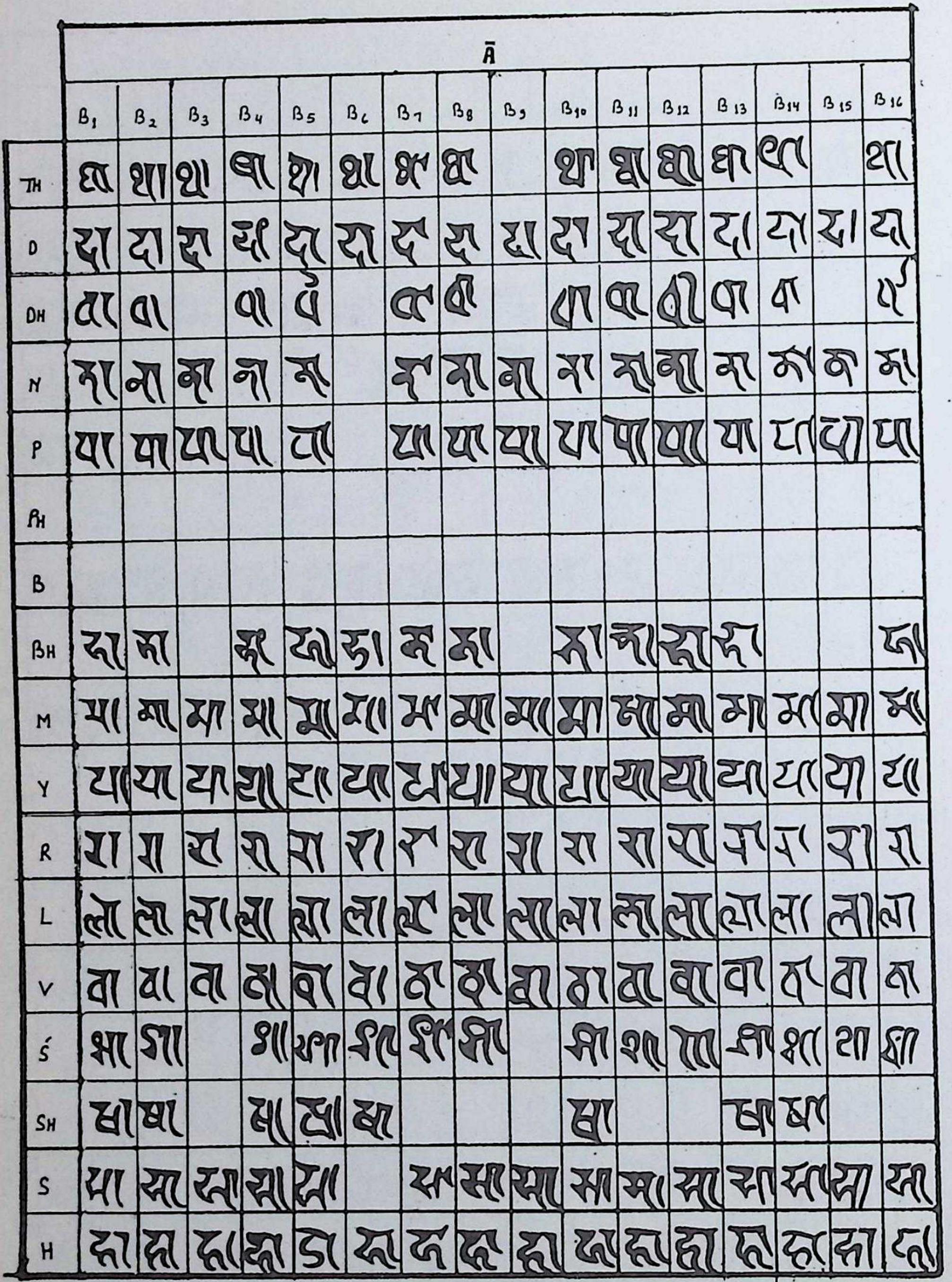
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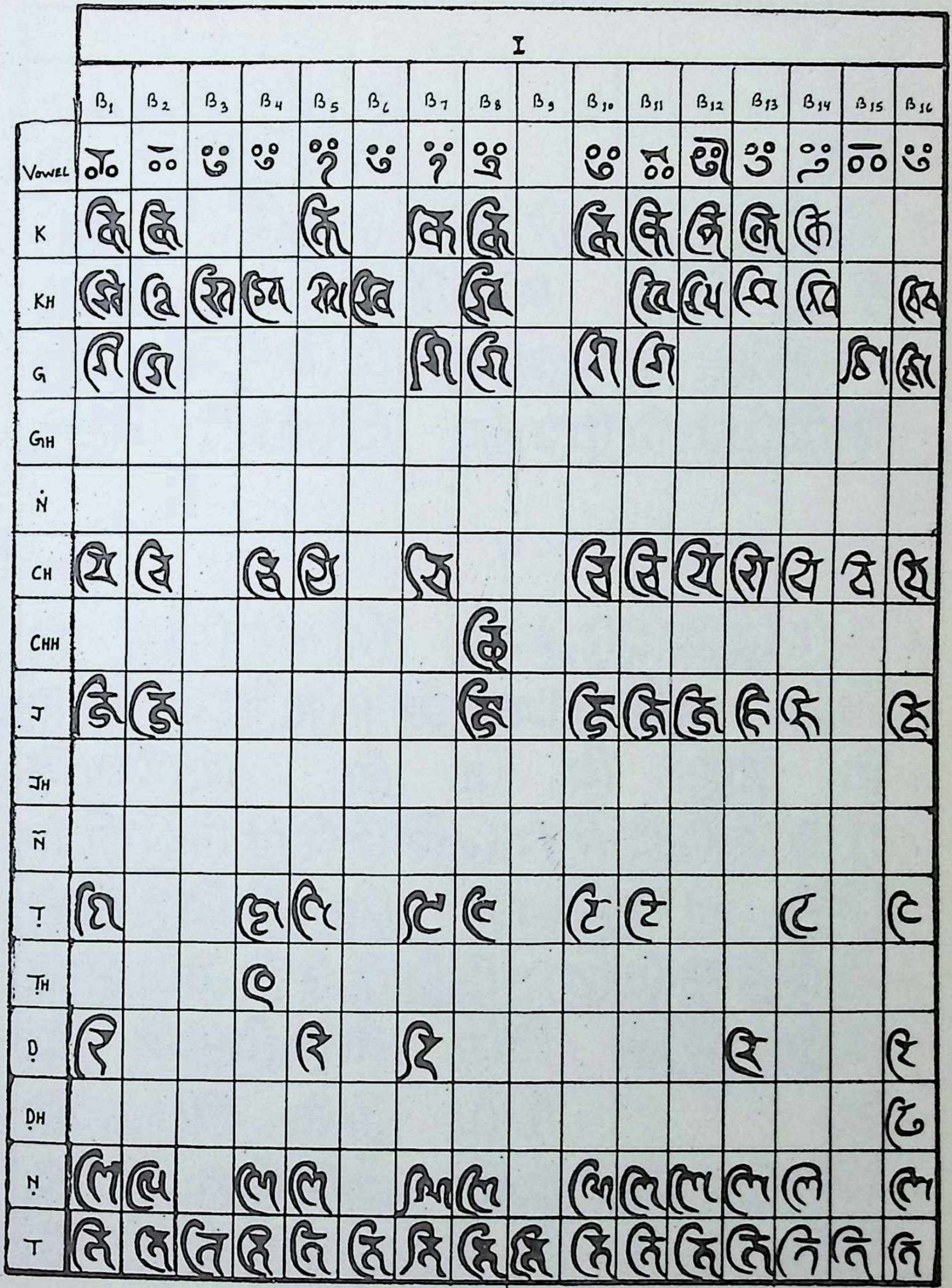
PLATE 35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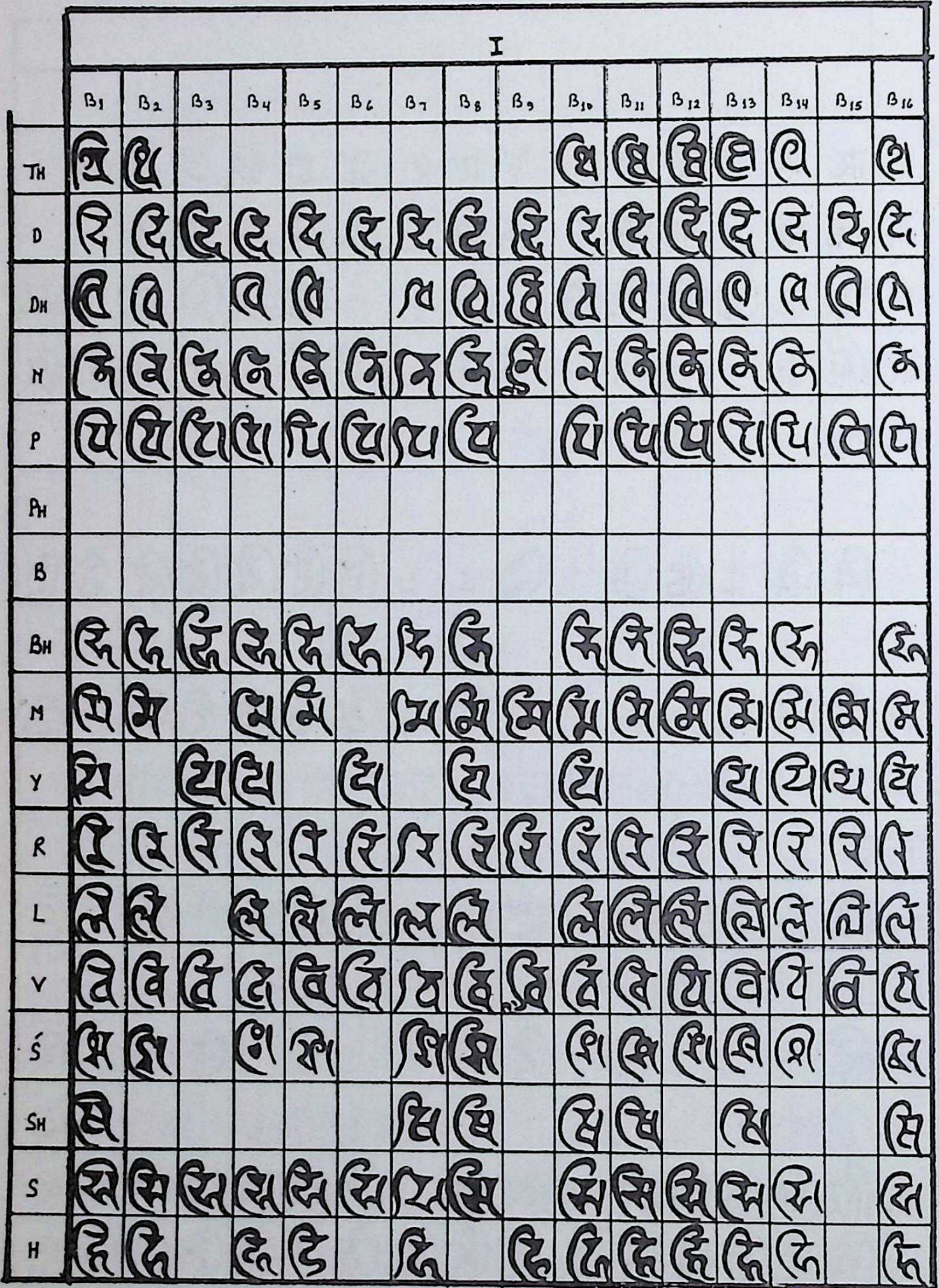
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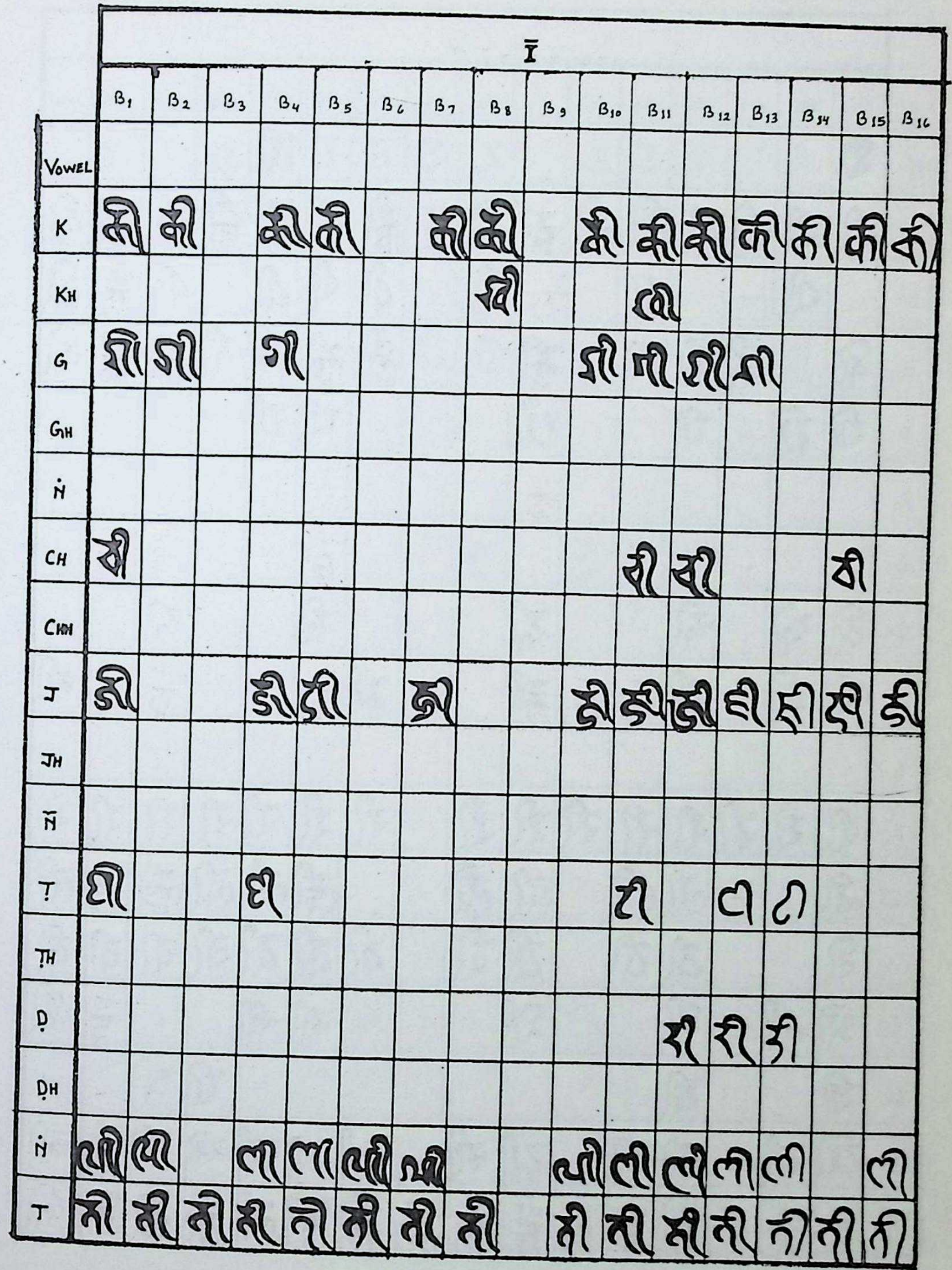
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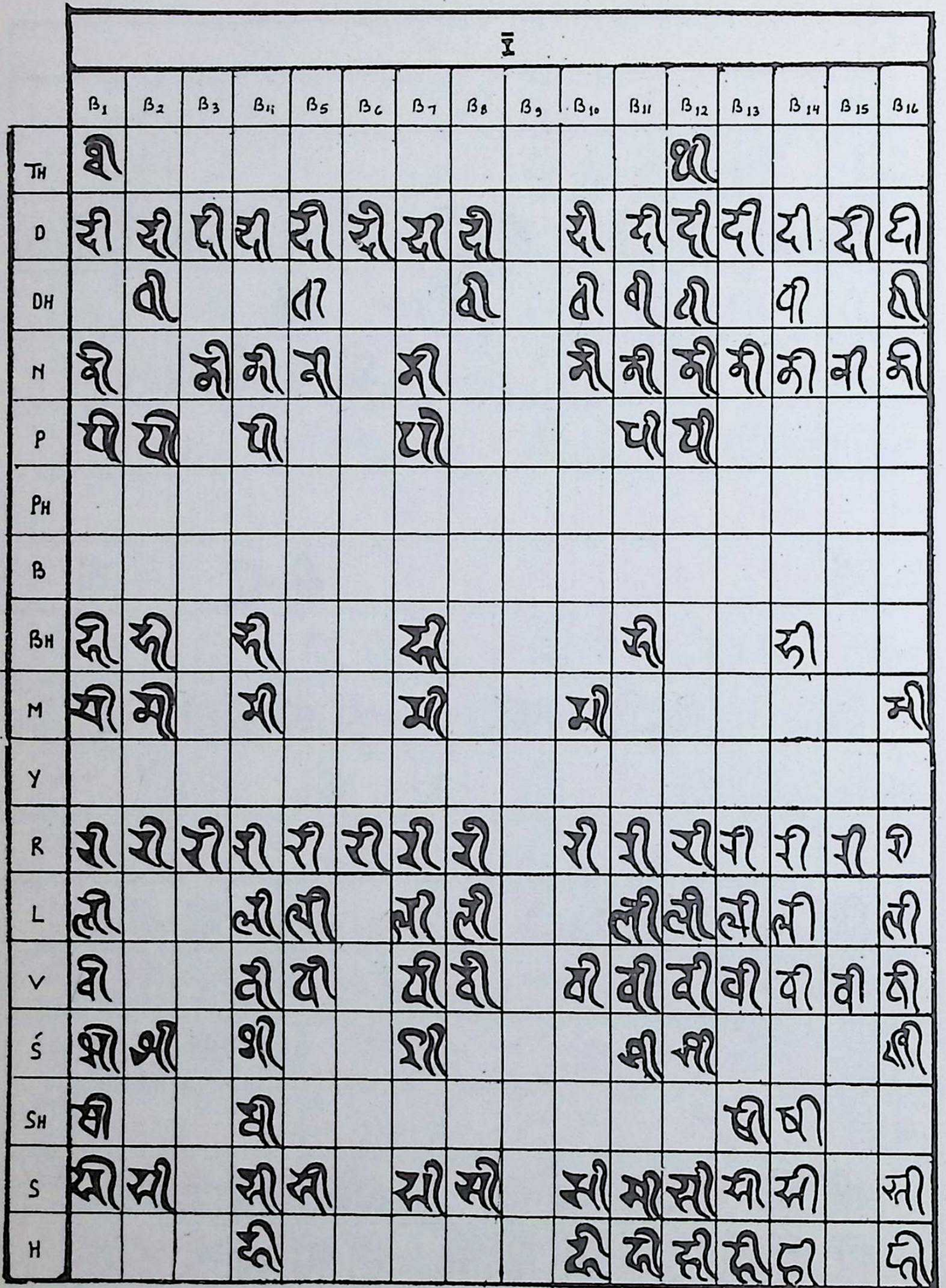
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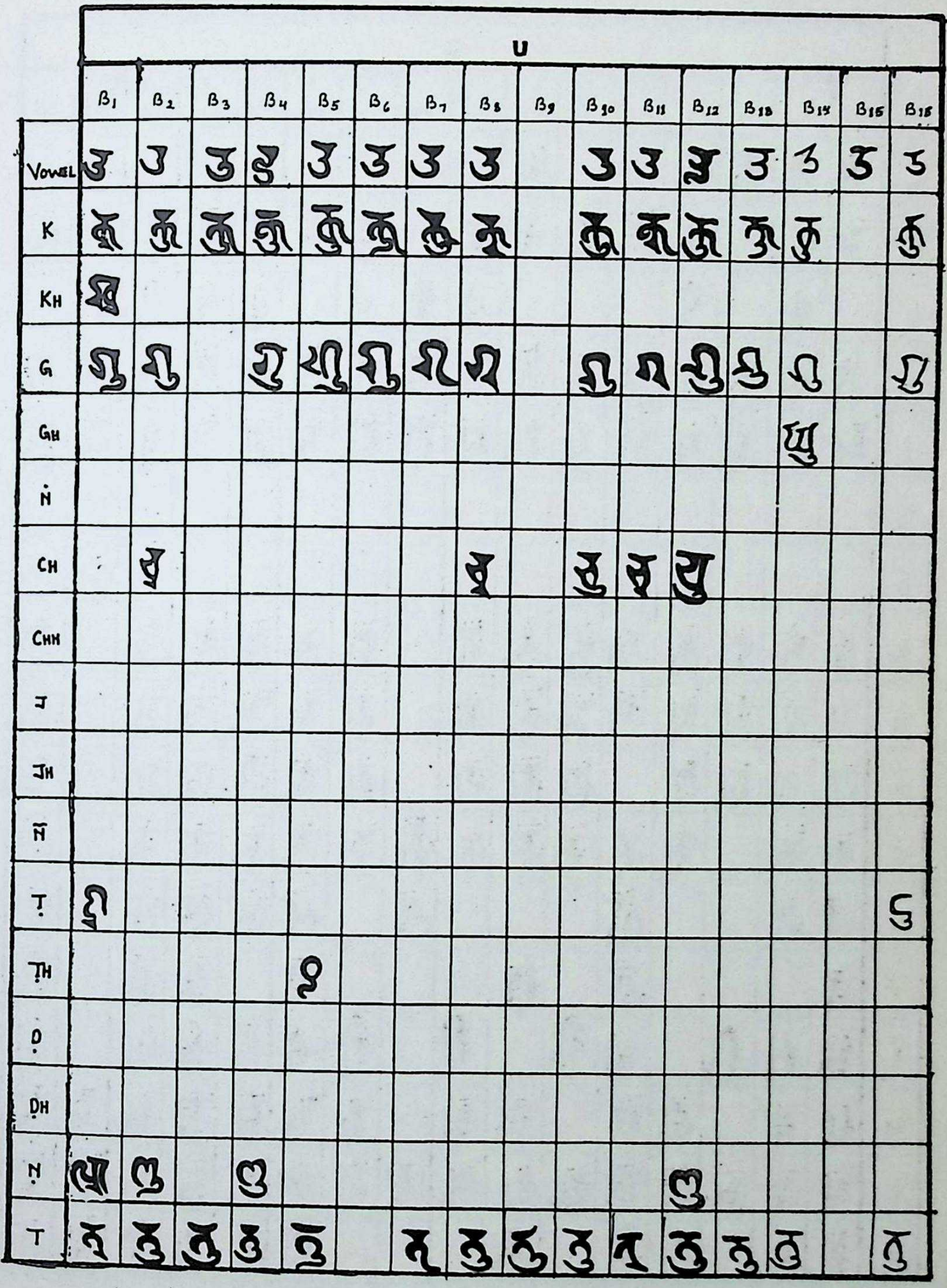
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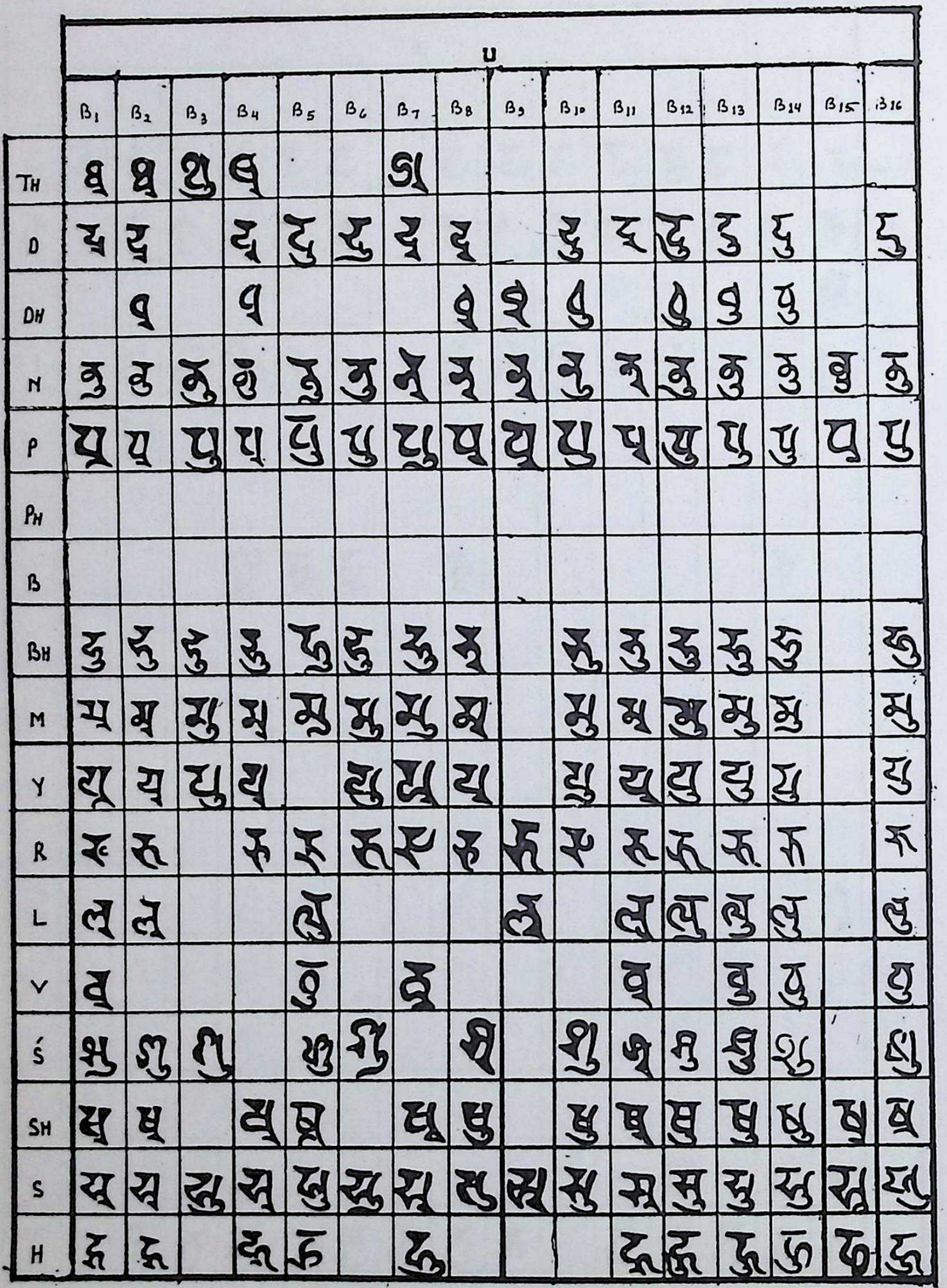
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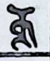
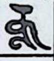
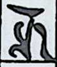
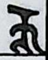
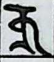
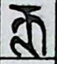
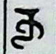
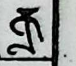
K																
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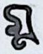
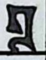
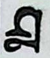
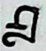
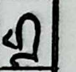
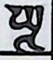
G																
GH																
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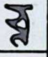
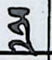
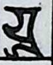
CH																
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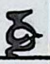
J																
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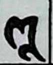
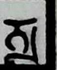
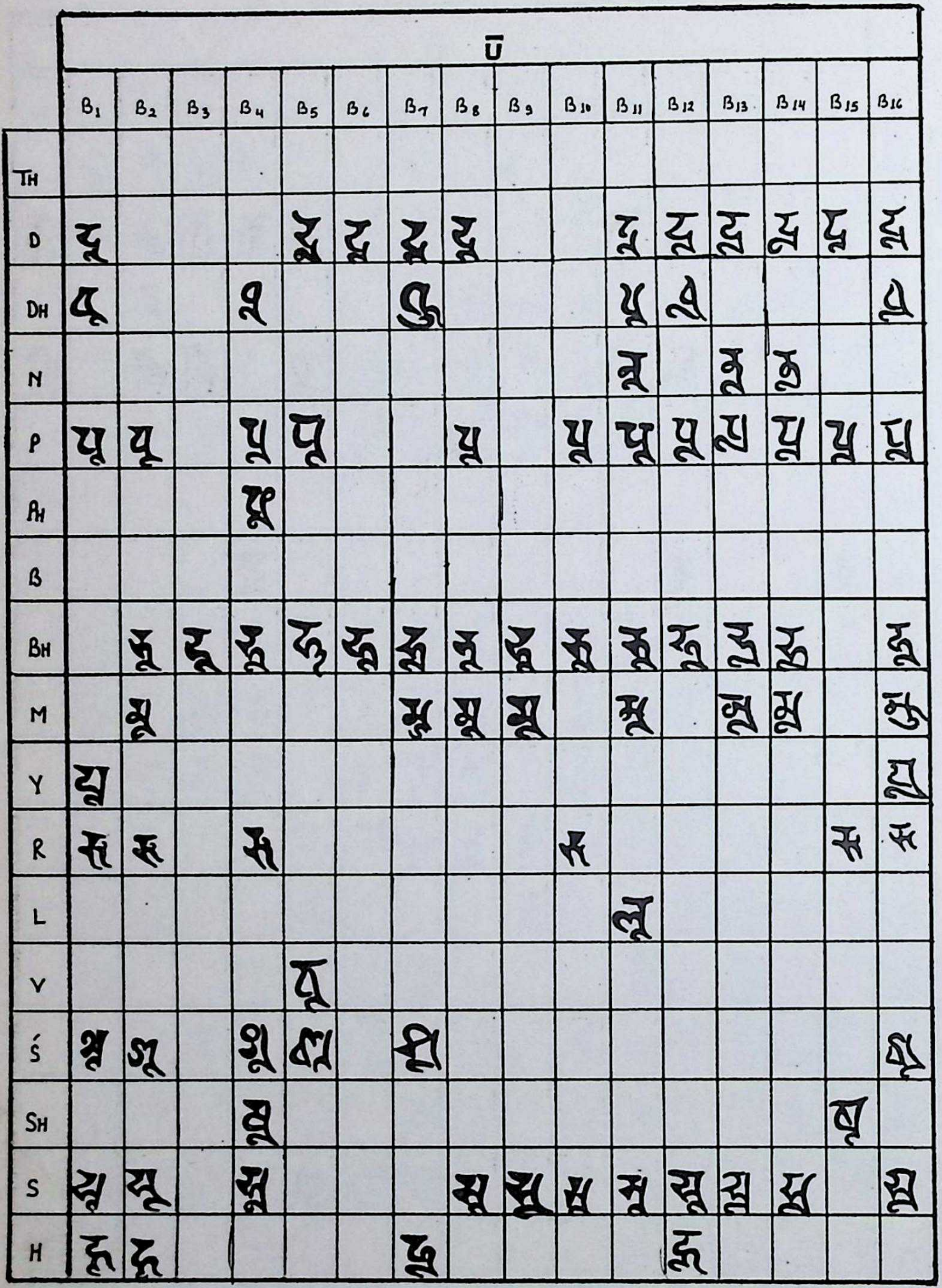
Ṇ																
T																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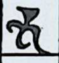
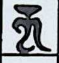
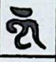
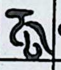
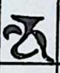
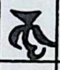
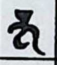
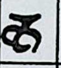
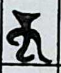
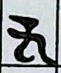
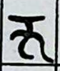
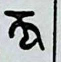
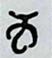
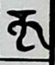
K																
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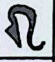
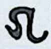
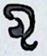
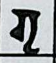
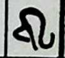
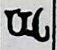
G																
GH																
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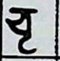
CH																
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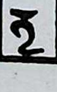
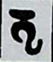
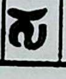
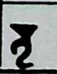
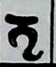
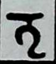
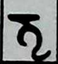
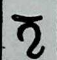
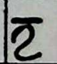
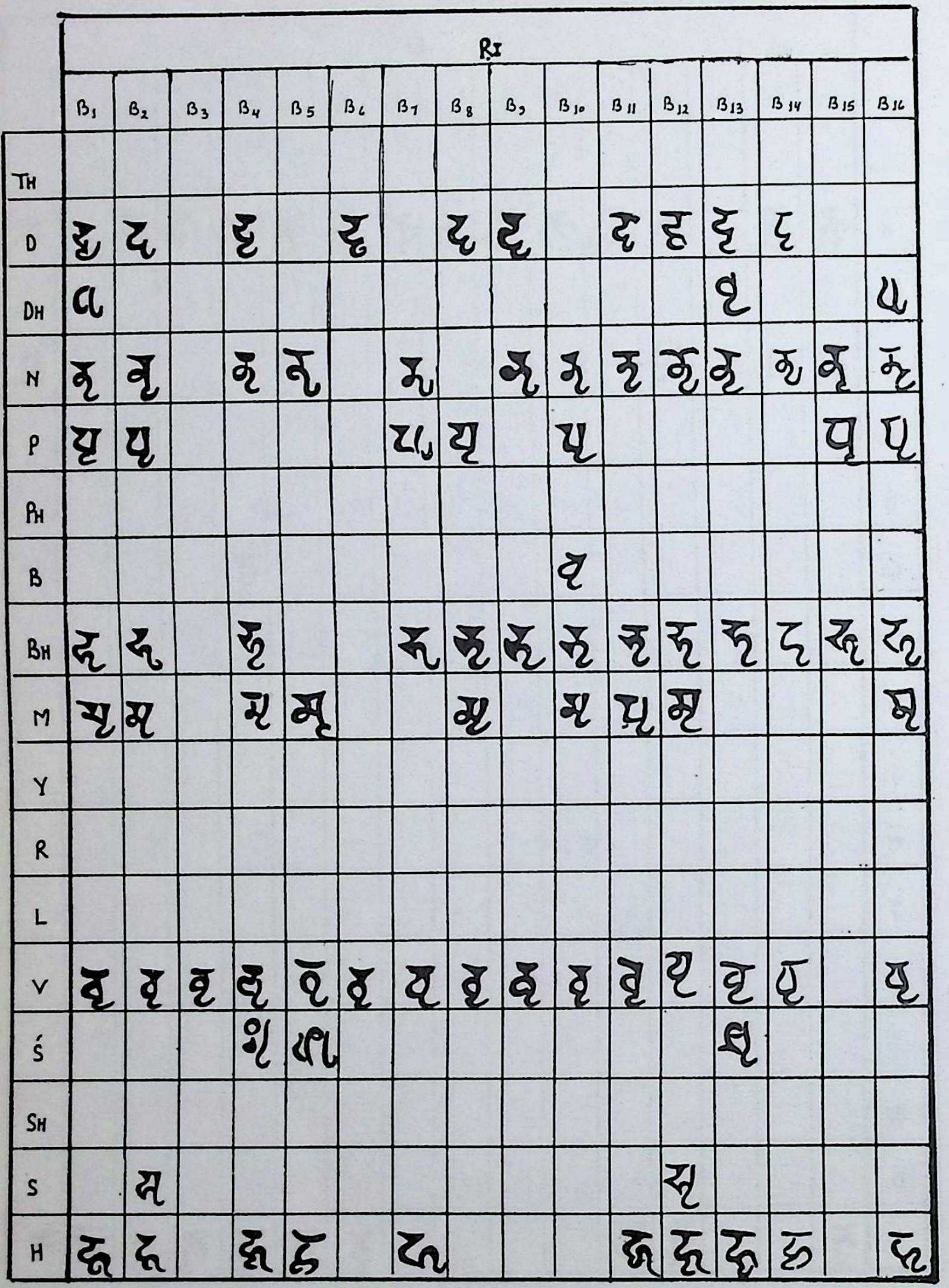
T																

9th CENTURY A.D.

PLATE 44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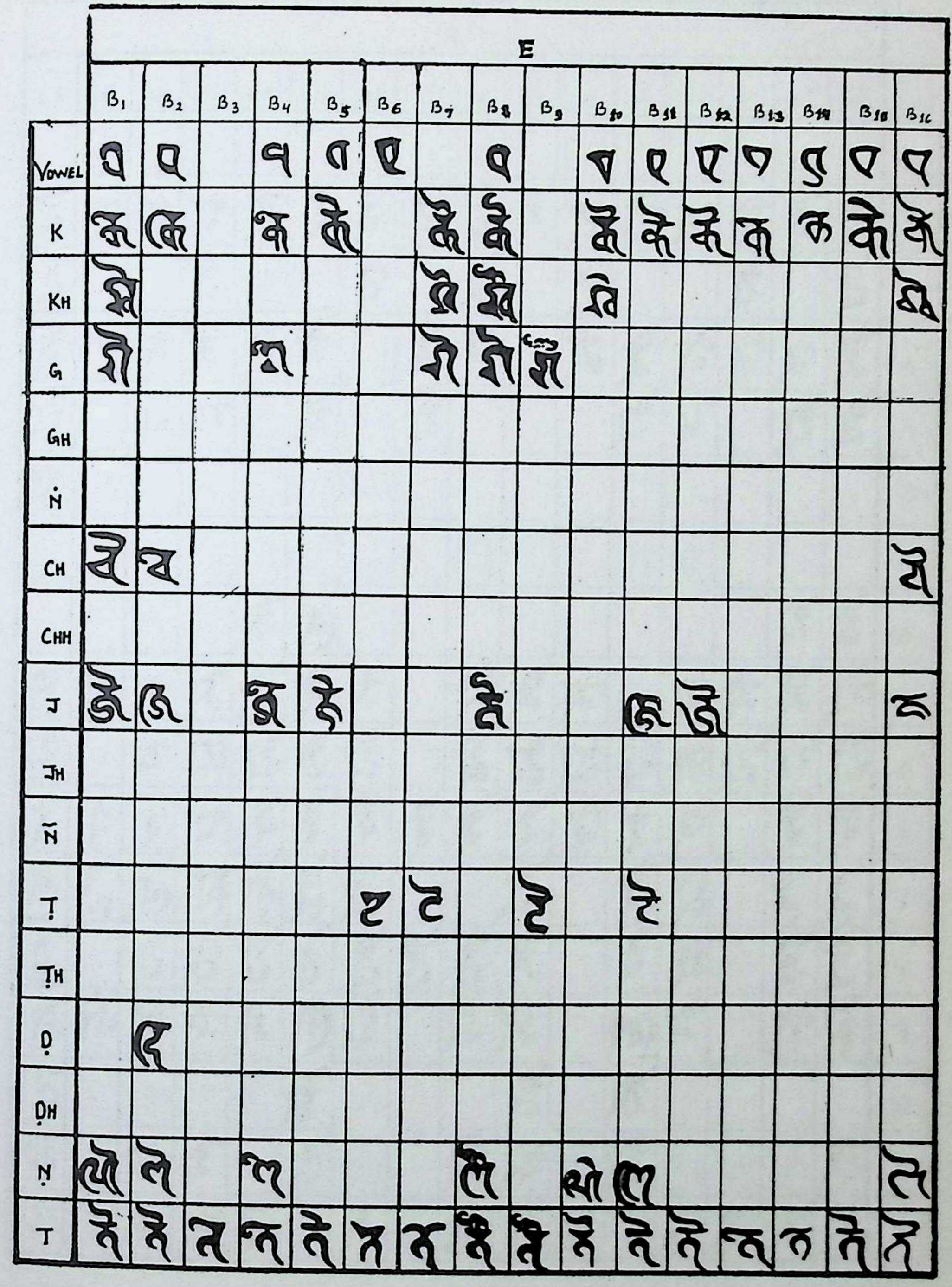
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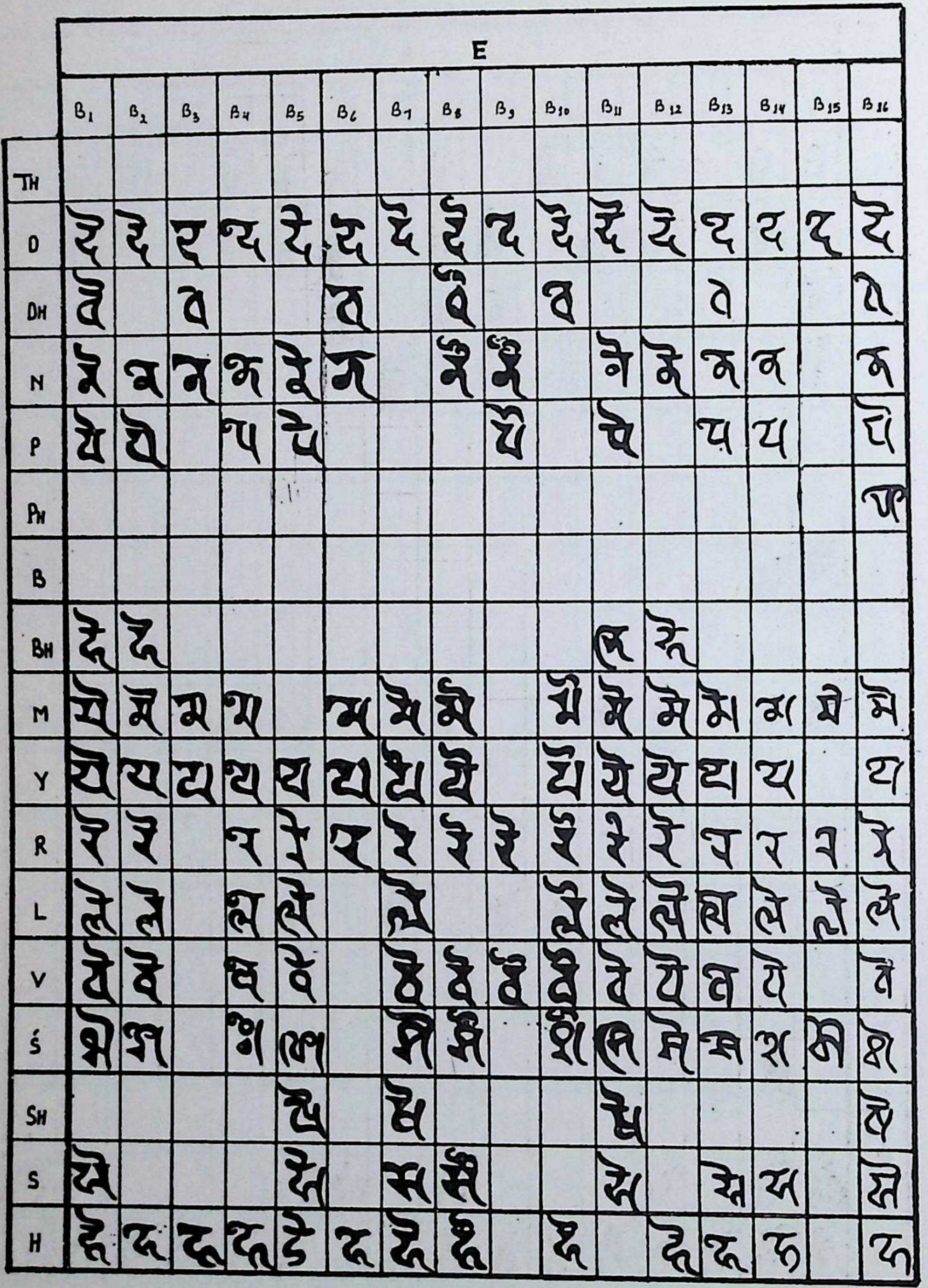
9th CENTURY A.D.

PLATE 46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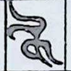
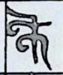
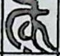
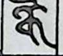
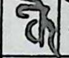
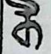
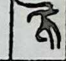
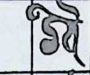
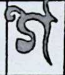
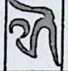
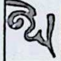
VOWEL																
K																
KH																
G																
GH																
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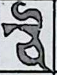
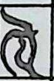
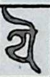
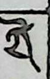
CH																
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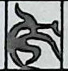
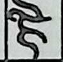
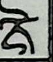
J																
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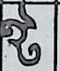
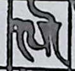
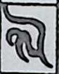
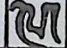
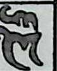
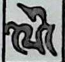
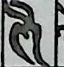
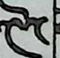
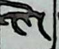
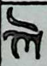
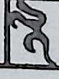
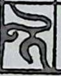
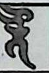
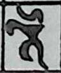
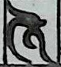
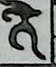
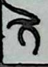
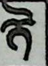
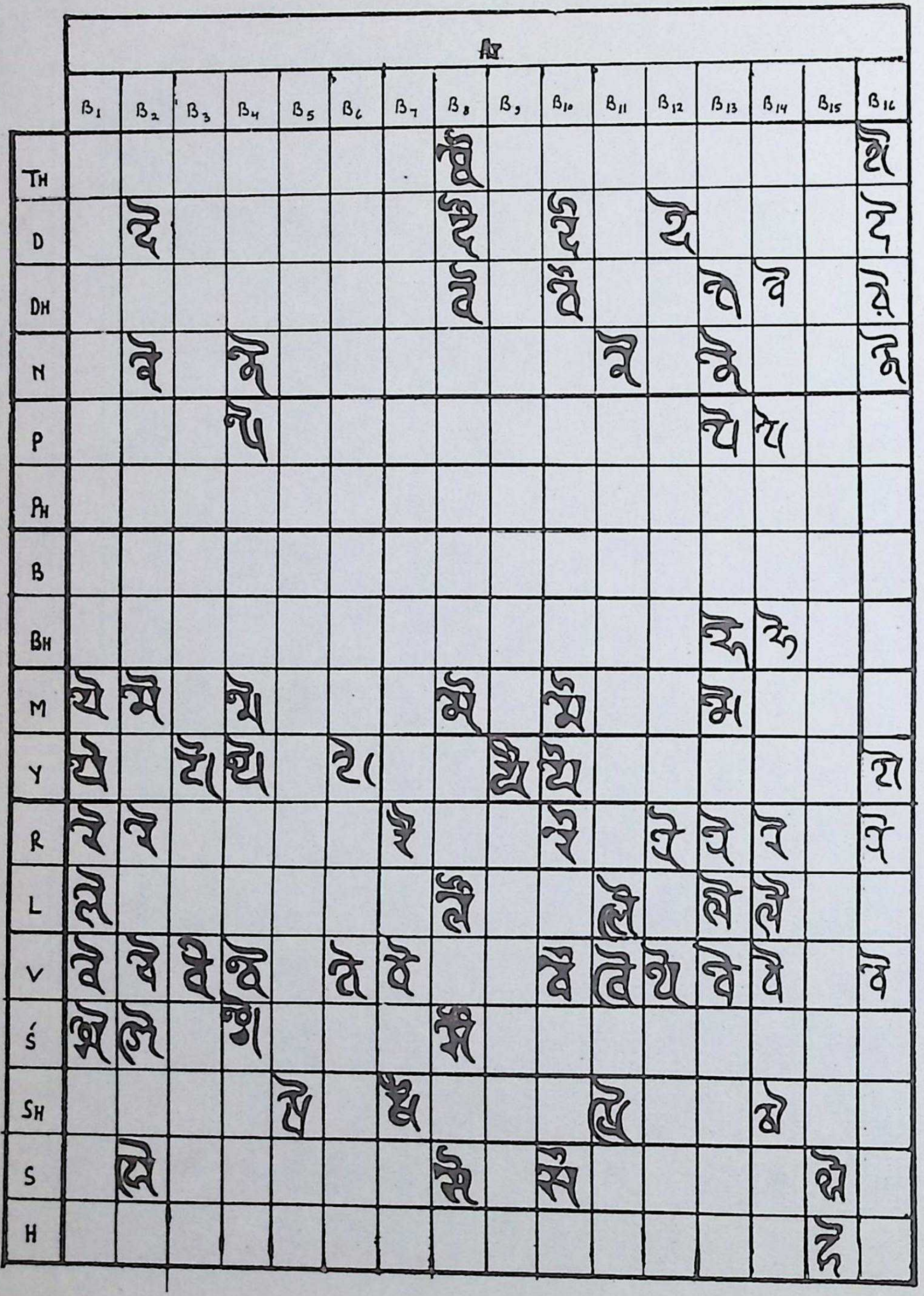
ḌH																
Ṇ																
T																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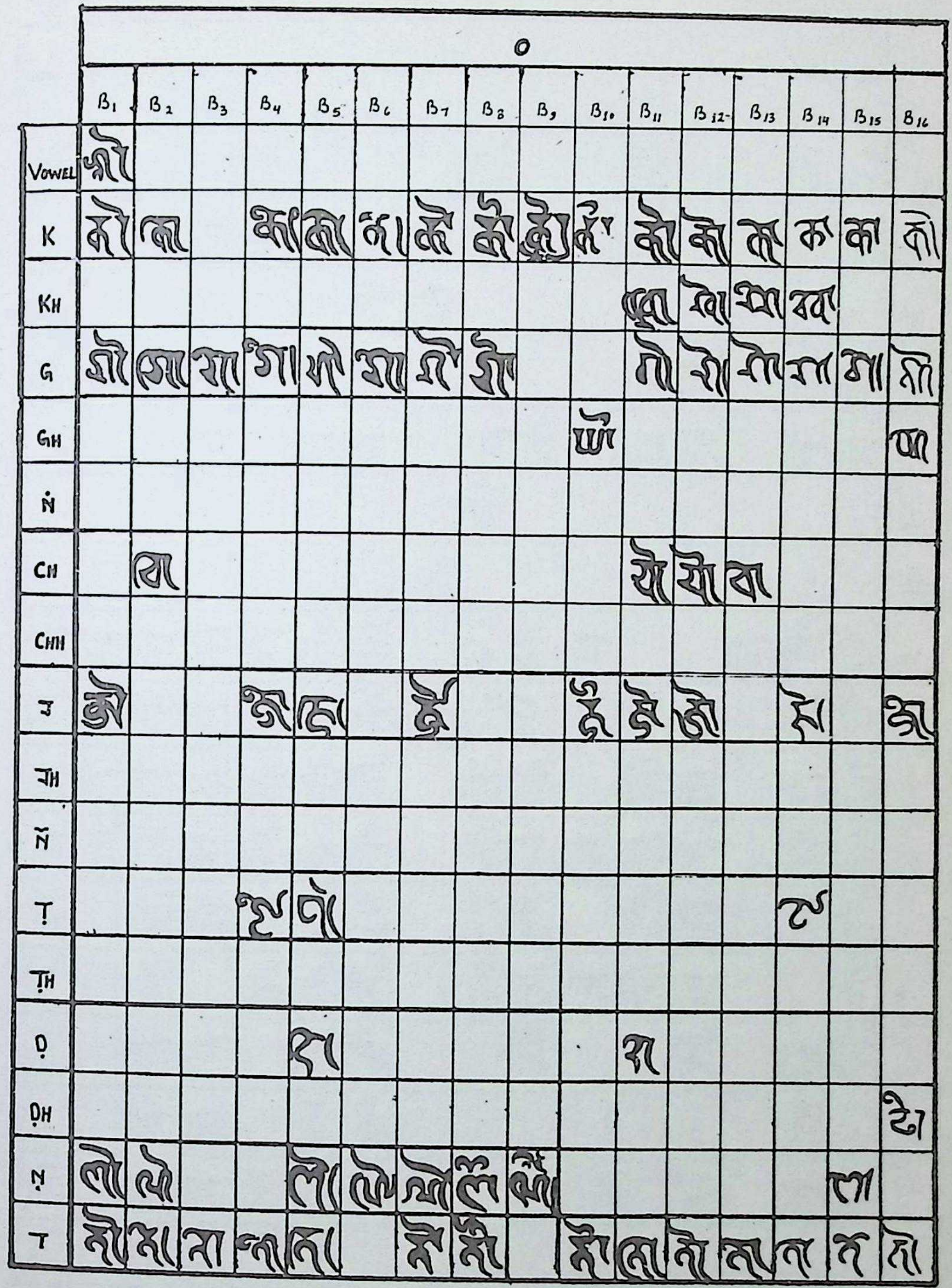
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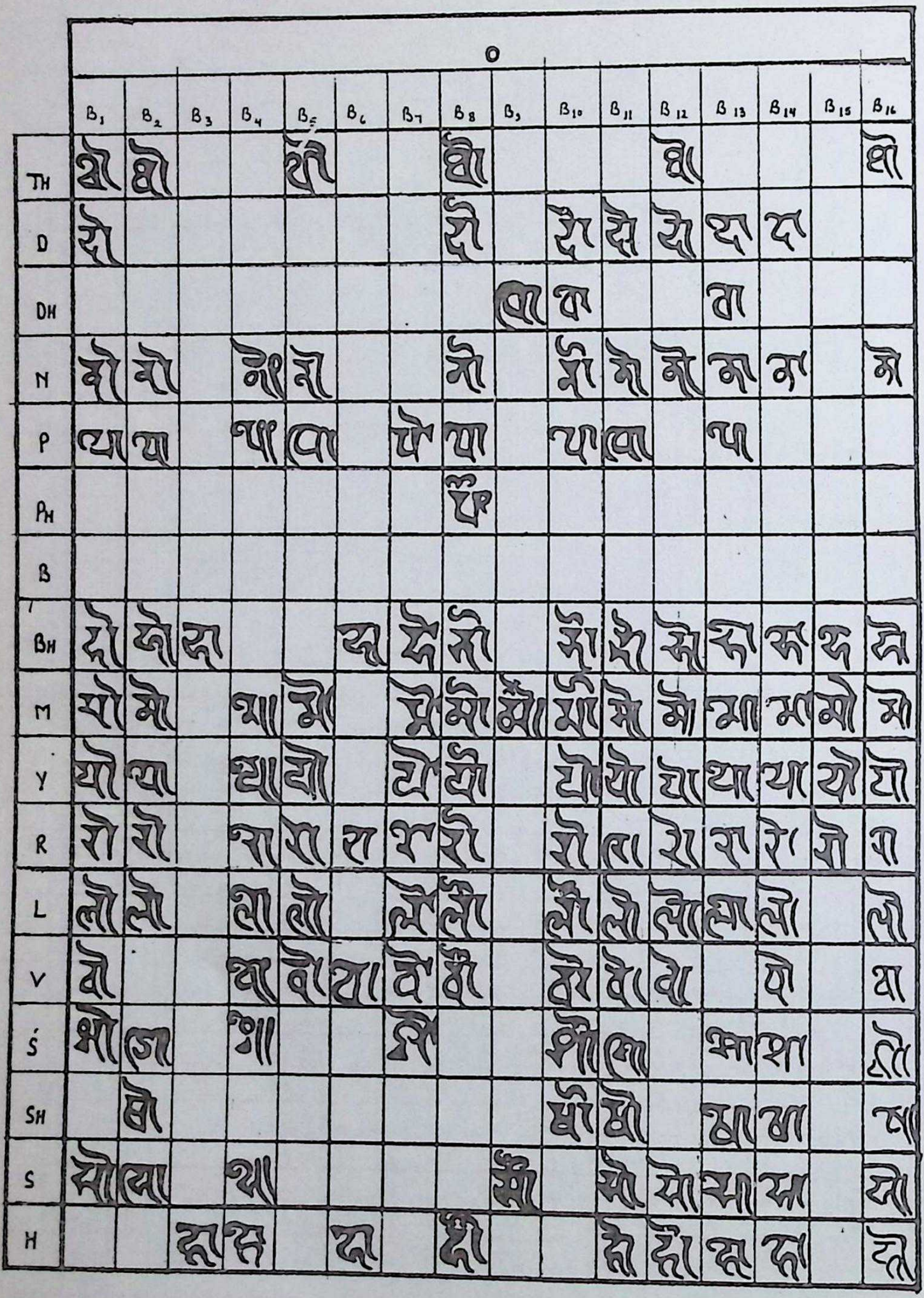
9th CENTURY A.D.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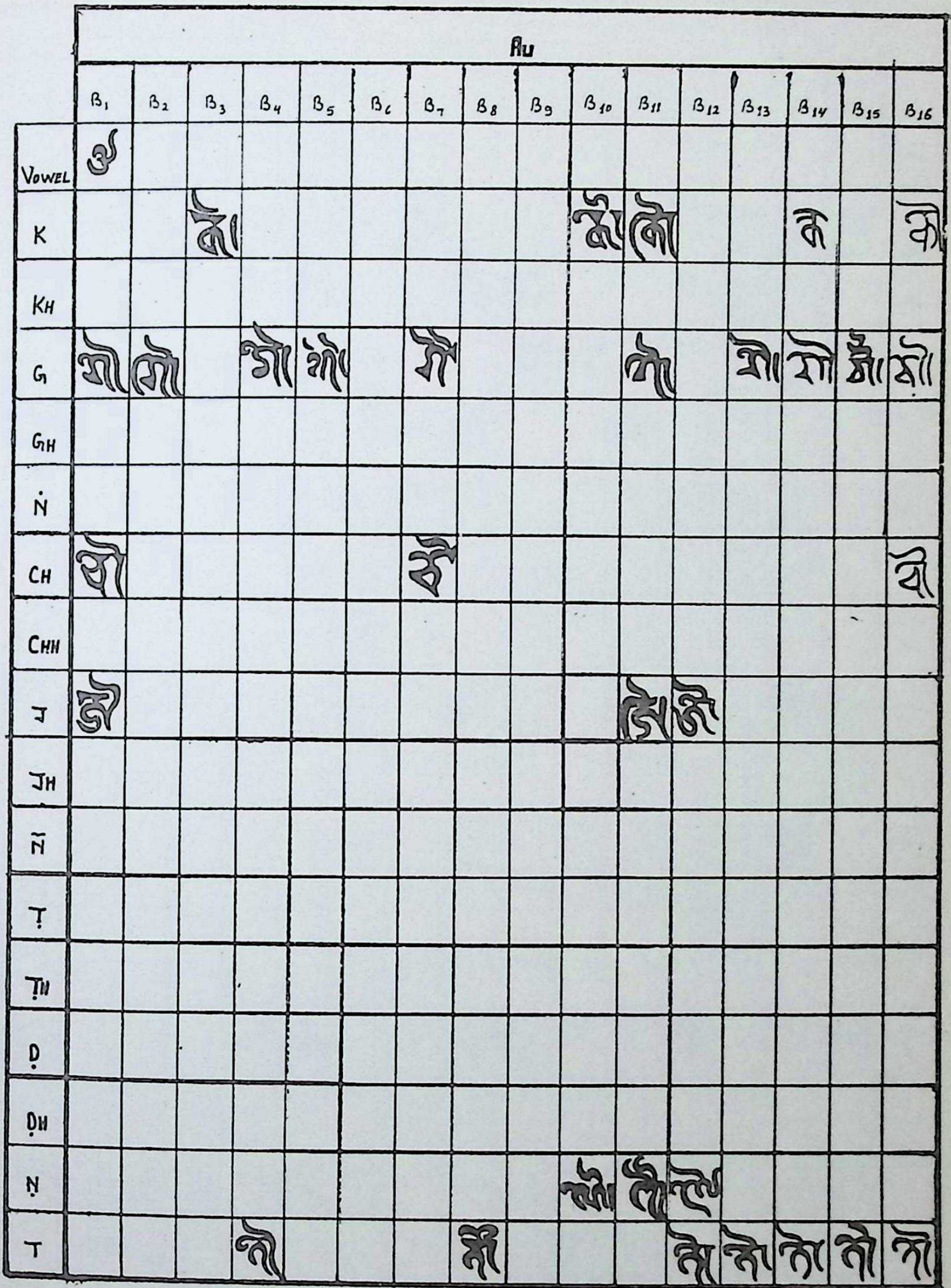
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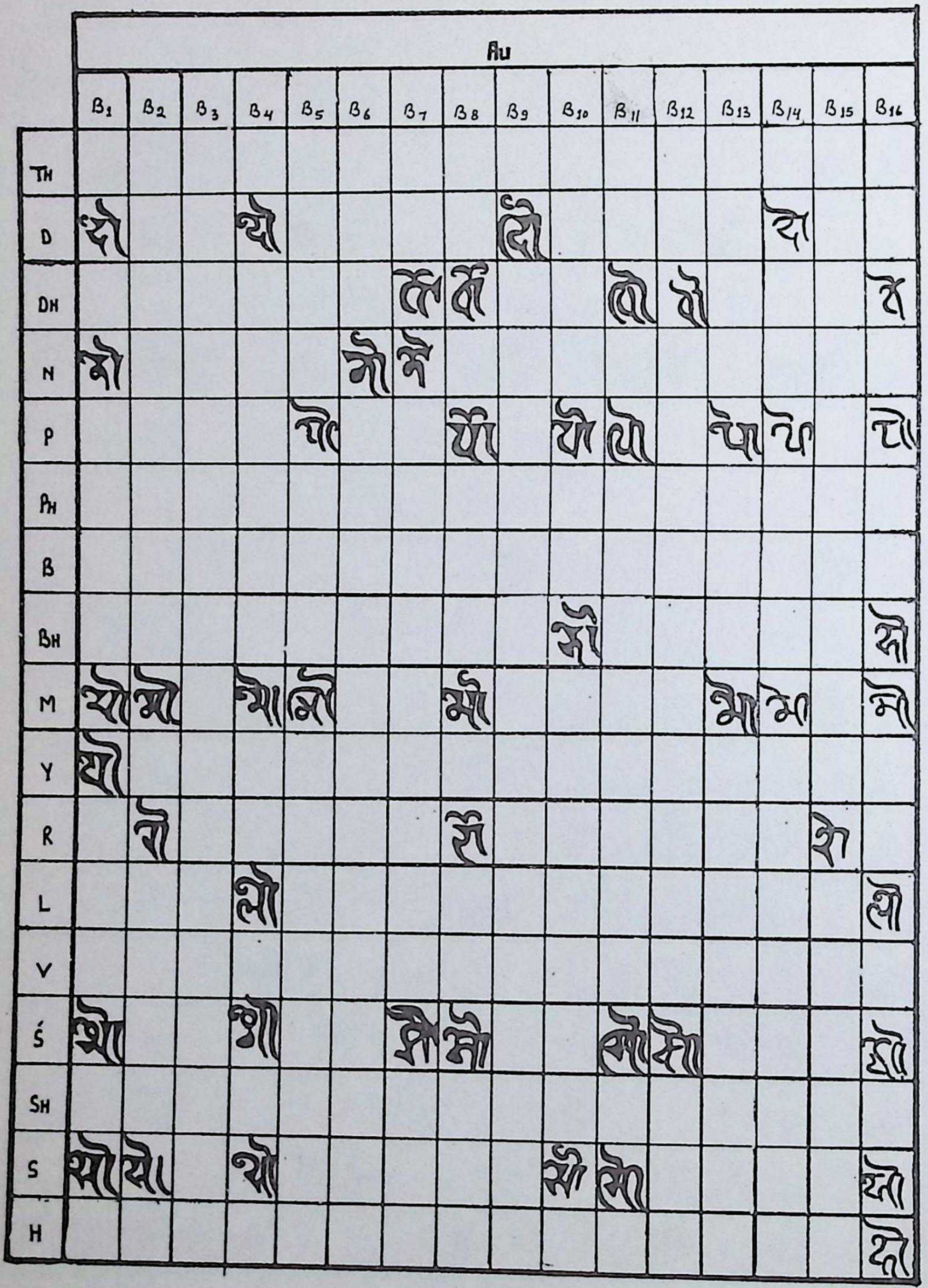
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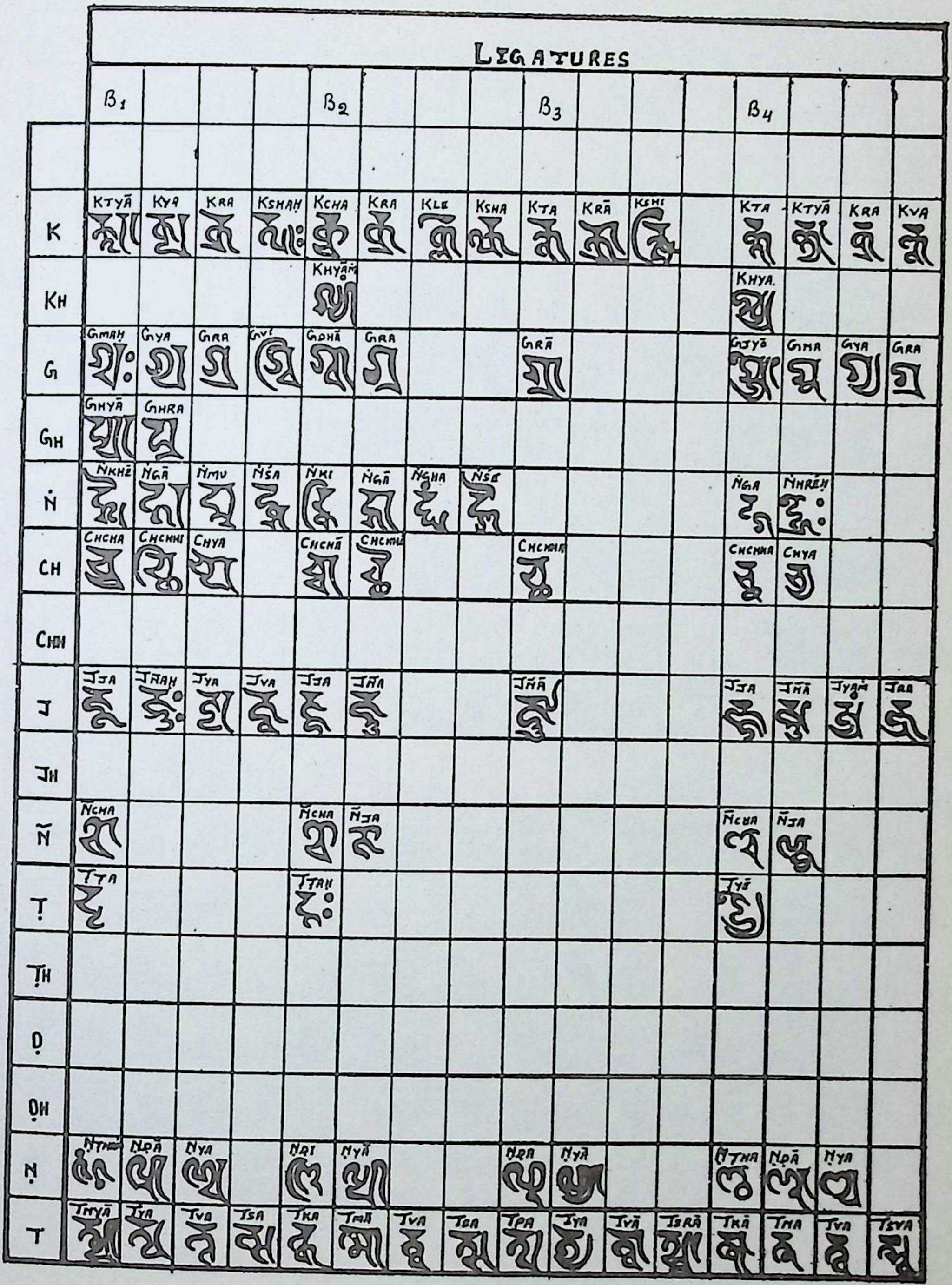

LIGATURES

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KH					KHYĀṂ								KHYA.			
G	GMAḤ	GYA	GRA	GVI	GDHĀ	GRA			GRĀ				GJYŌ	GMA	GYA	GRA
GH	GHYĀ	GHRA														
Ṅ	ṄKHĒ	ṄGĀ	ṄMU	ṄSA	ṄKI	ṄGĀ	ṄGHA	ṄSE					ṄGA	ṄHRĒḤ		
CH	CHCHA	CHCHHI	CHYA		CHCHĀ	CHCHHU			CHCHHA				CHCHHA	CHYA		
CHH																
J	JJA	JÑAḤ	JYA	JVA	JJA	JÑA			JÑĀ				JJA	JÑĀ	JYĀṂ	JRA
JH																
Ñ	ÑCHA				ÑCHA	ÑJA							ÑCHA	ÑJA		
Ṭ	ṬṬA				ṬṬAḤ								ṬYĀ			
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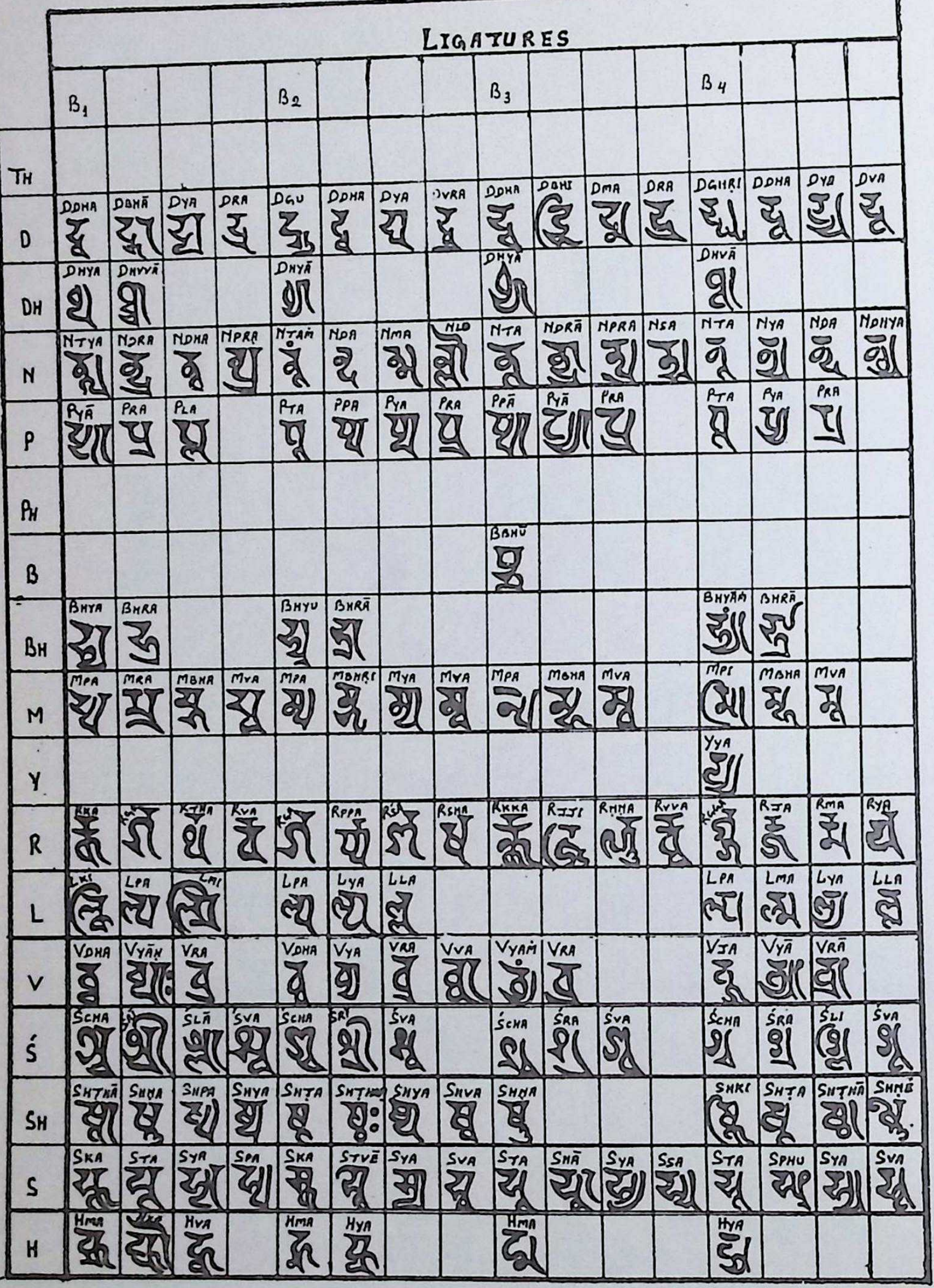
ḌH																
Ṇ	ṆṬHĀ	ṆḌĀ	ṆYA		ṆḌI	ṆYĀ			ṆḌA	ṆYĀ			ṆṬHA	ṆḌĀ	ṆYA	
T	THYĀ	TYA	TVA	TSA	TKA	TMĀ	TVA	TRA	TPA	TM	TVĀ	TSRĀ	TKĀ	TNA	TVA	TSVA

PLATE 54

9th CENTURY A.D.



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	B1				B2				B3				B4			
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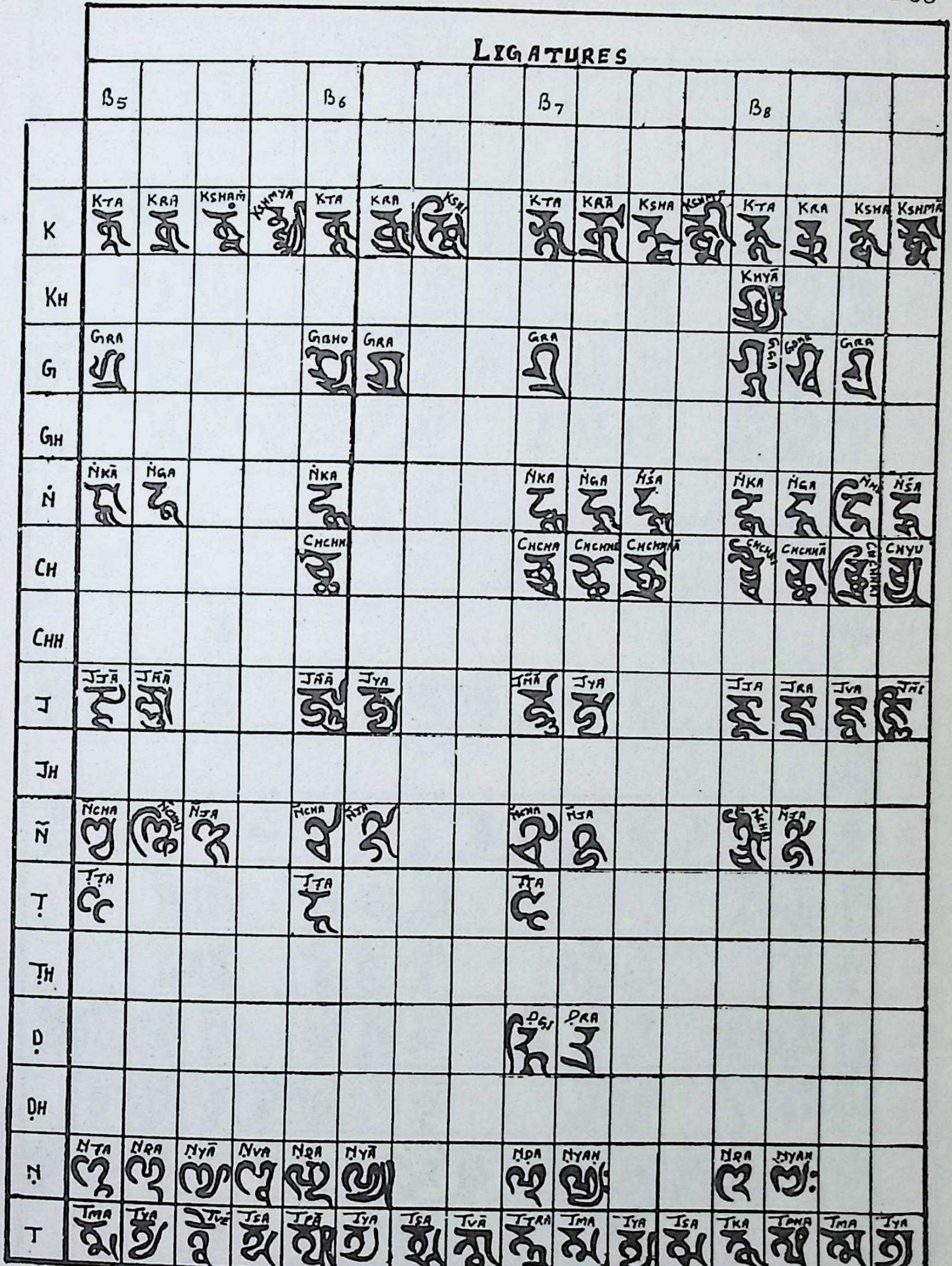
D	DDHA	DDHĀ	DYA	DRA	DGU	DDHA	DYA	DVRA	DDHA	DDHI	DMA	DRA	DGHṚI	DDHA	DYA	DVA
DH	DHYA	DHYVĀ			DHYĀ				DHYA				DHVĀ			
N	NTYA	NDRA	NDHA	NPRA	NTAṀ	NDA	NMA	NLD	NTA	NDRĀ	NPRA	NSA	NTA	NYA	NDA	NDHYA
P	PYĀ	PRA	PLA		PTA	PPA	PYA	PRA	PPĀ	PYĀ	PRA		PTA	PYA	PRA	
PH																
B									BBHŪ							
BH	BHYA	BHRA			BHYU	BHRĀ							BHYAṀ	BHRĀ		
M	MPA	MRA	MBHA	MVA	MPA	MBHṚI	MYA	MVA	MPA	MBHA	MVA		MPI	MBHA	MVA	
Y													YYA			
R	RKA	[illegible]	RTHA	RVA	[illegible]	RPPA	RŚA	RSHA	RKKA	RJJI	RṆMA	RVVA	[illegible]	RJA	RMA	RYA
L	LKI	LPA	LMI		LPA	LYA	LLA						LPA	LMA	LYA	LLA
V	VDHA	VYĀṆ	VRA		VDHA	VYA	VRA	VVA	VYAṀ	VRA			VJA	VYĀ	VRĀ	
Ś	ŚCHA	[illegible]	ŚLĀ	ŚVA	ŚCHA	ŚRĪ	ŚVA		ŚCHA	ŚRA	ŚVA		ŚCHA	ŚRA	ŚLI	ŚVA
SH	SHṬHĀ	SHṆA	SHPA	SHYA	SHṬA	SHṬH[illegible]	SHYA	SHVA	SHṆA				SHKI	SHṬA	SHṬHĀ	SHṆE
S	SKA	STA	SYA	SPA	SKA	STVĒ	SYA	SVA	STA	SMĀ	SYA	SSA	STA	SPHU	SYA	SVA
H	HMA	[illegible]	HVA		HMA	HYA			HMA				HYA			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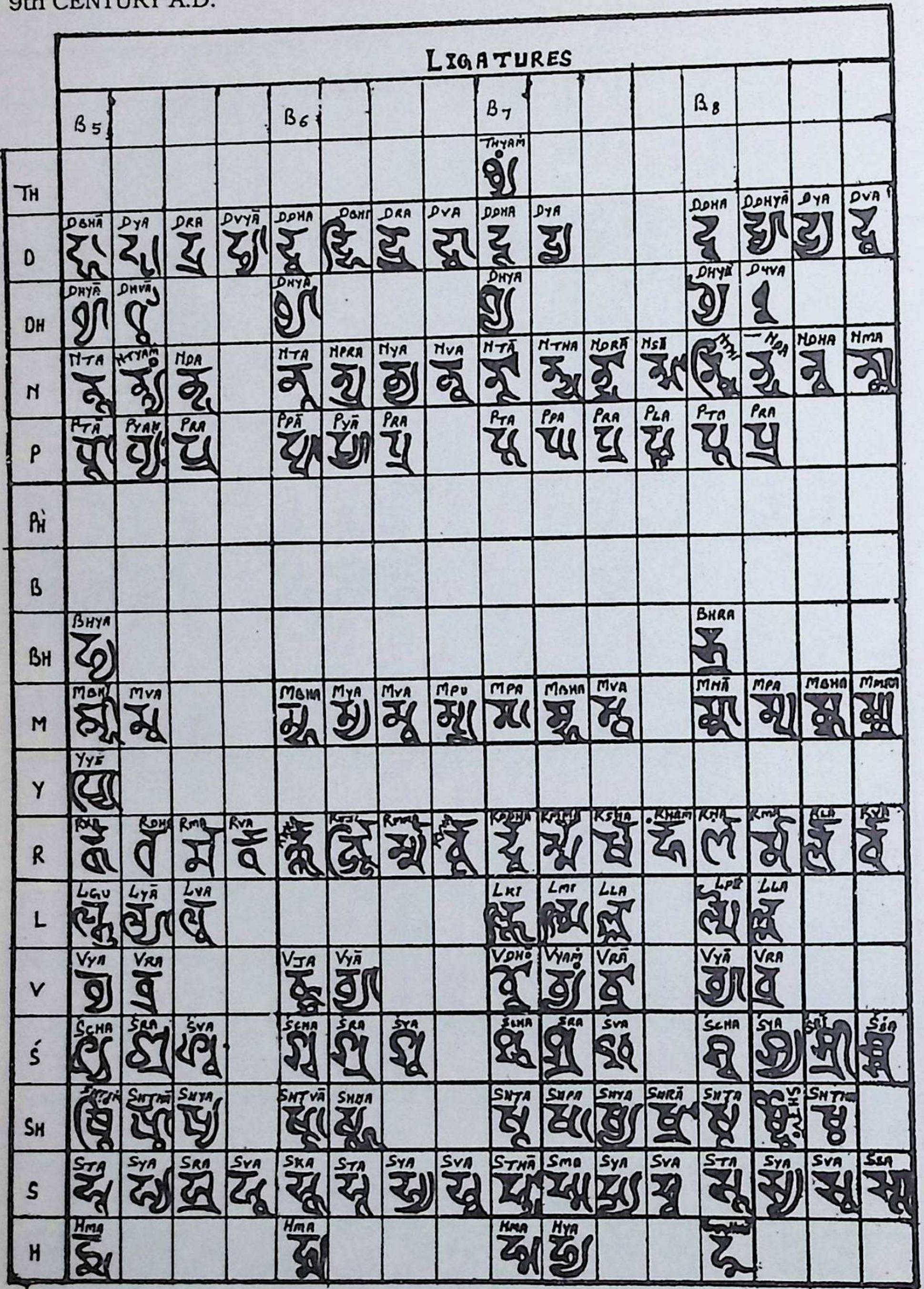
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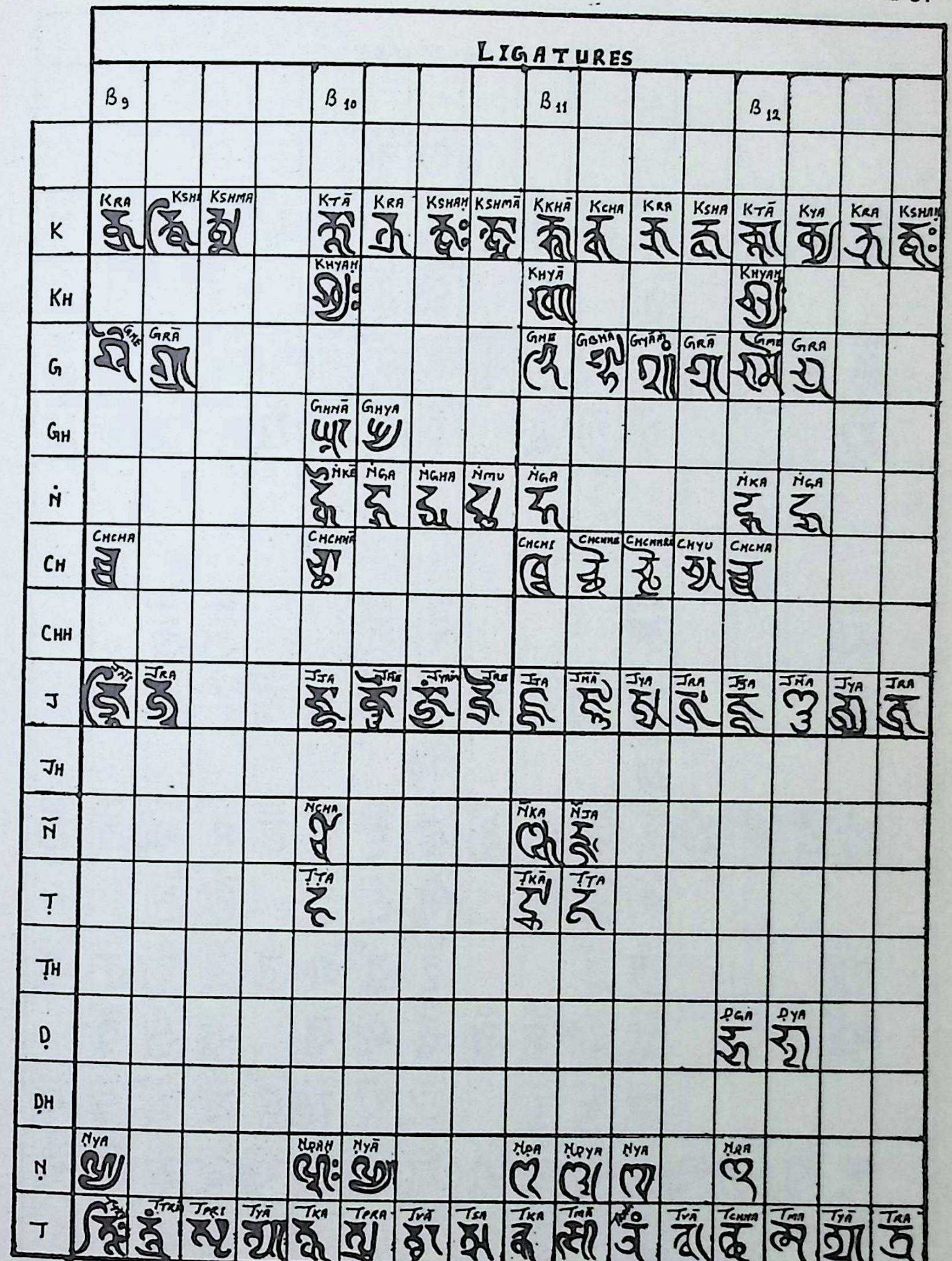
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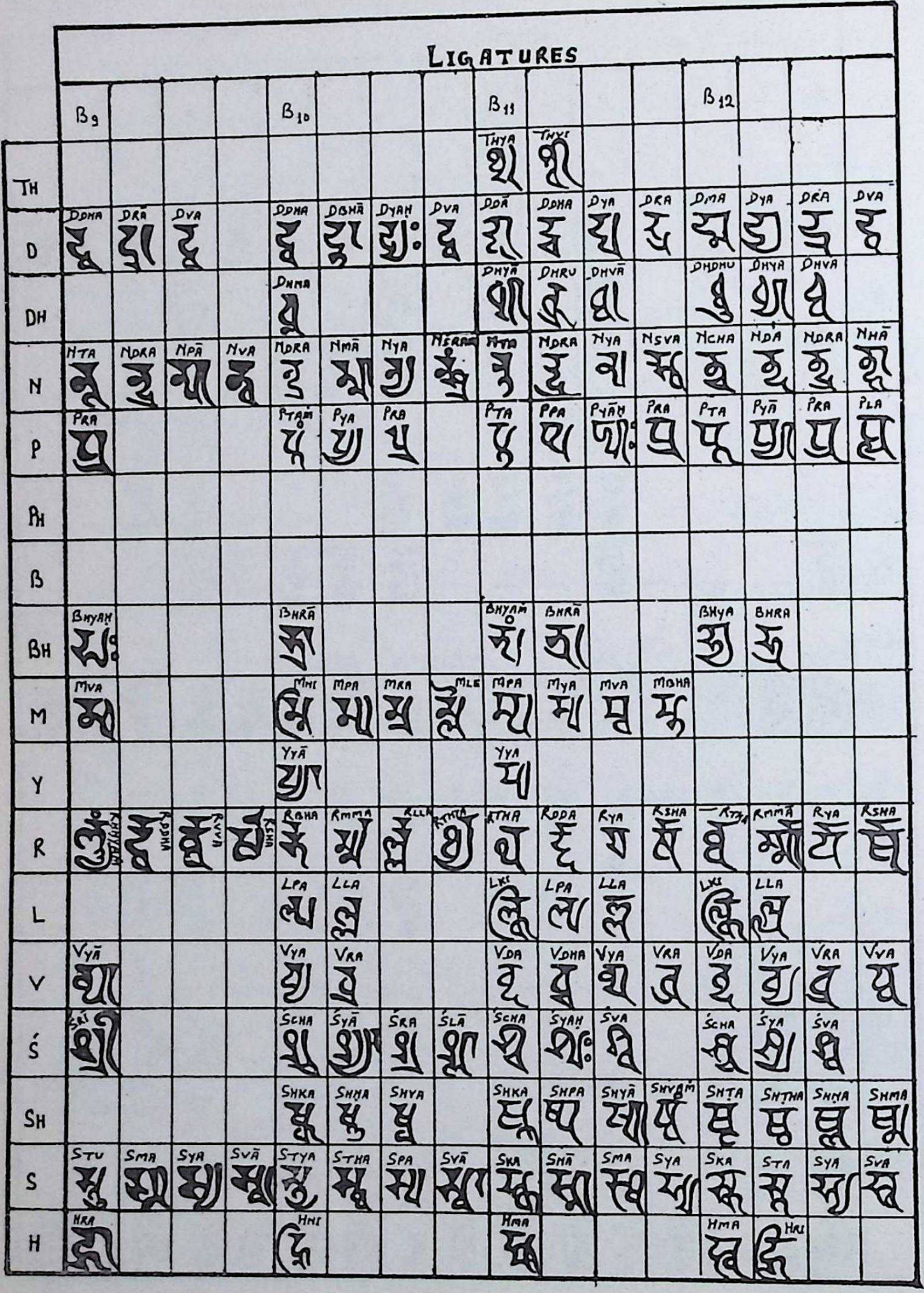
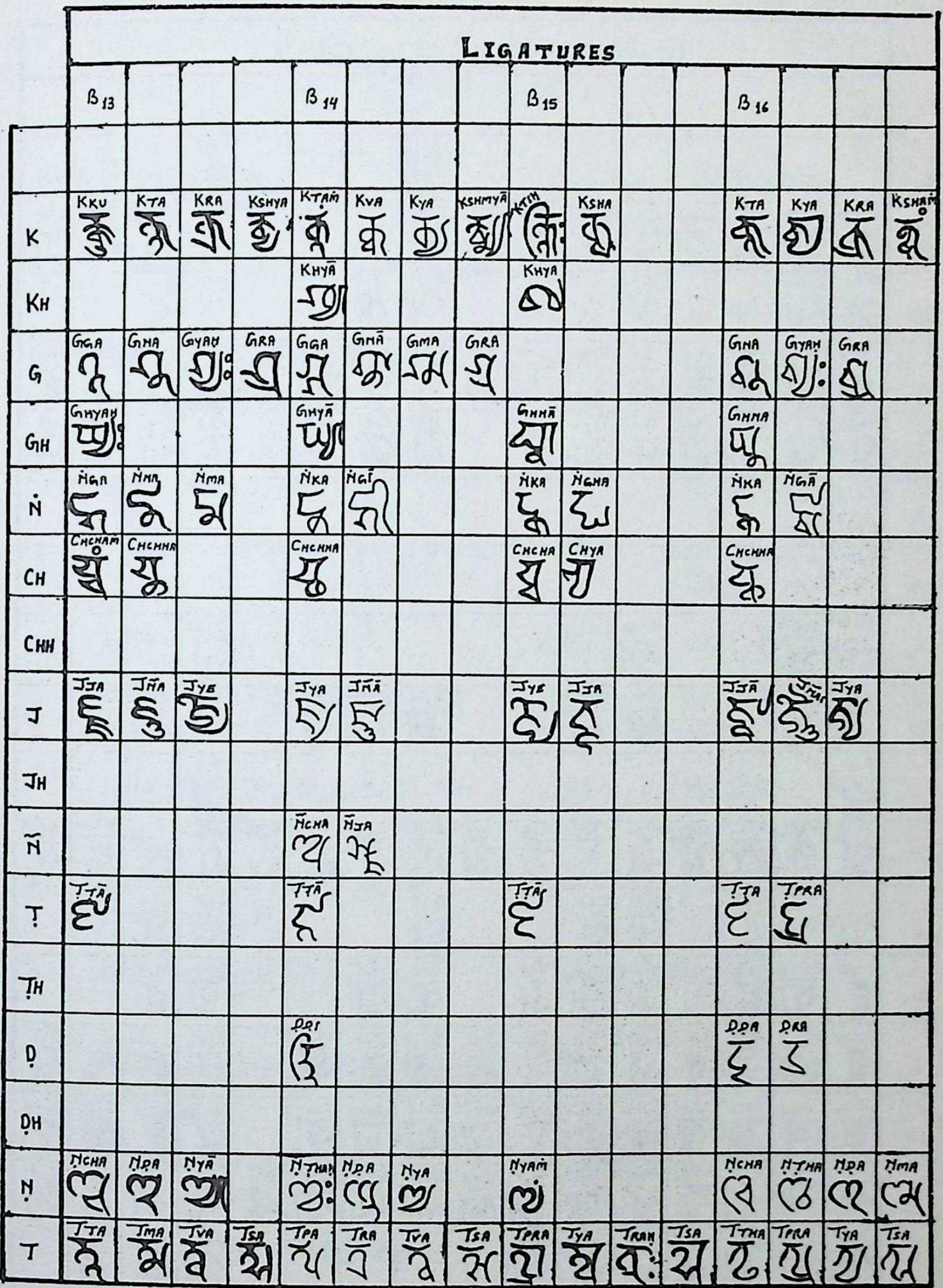


LIGATURES

	B_9				B_{10}				B_{11}				B_{12}			
TH									THYA	THYI						
D	DDHA	DRĀ	DVA		DDHA	DBHĀ	DYAḤ	DVA	DDĀ	DDHA	DYA	DRA	DMA	DYA	DRA	DVA
DH					DHMA				DHYĀ	DHRU	DHVĀ		DHDHU	DHYA	DHVA	
N	NTA	NDRA	NPĀ	NVA	NDRA	NMĀ	NYA	NSRA	NTA	NDRA	NYA	NSVA	NCHA	NDA	NDRA	NHĀ
P	PRA				PTAṀ	PYA	PRA		PTA	PPA	PYĀḤ	PRA	PTA	PYĀ	PRA	PLA
PH																
B																
BH	BHYAḤ				BHRĀ				BHYAṀ	BHRĀ			BHYA	BHRA		
M	MVA				MNI	MPA	MRA	MLE	MPA	MYA	MVA	MBHA				
Y					YYĀ				YYA							
R	RMHYAṀ	RDDHA	RVVA	RSHA	RBHA	RMMA	RLLA	RTHA	RTHA	RDDA	RYA	RSHA	RTYA	RMMĀ	RYA	RSHA
L					LPA	LLA			LKI	LPA	LLA		LKI	LLA		
V	VYĀ				VYA	VRA			VDA	VDHA	VYA	VRA	VDA	VYA	VRA	VVA
Ś	ŚRĪ				ŚCHA	ŚYĀ	ŚRA	ŚLĀ	ŚCHA	ŚYAḤ	ŚVA		ŚCHA	ŚYA	ŚVA	
SH					SHKA	SHṆA	SHYA		SHKA	SHPA	SHYĀ	SHVAṀ	SHṬA	SHṬHA	SHṆA	SHMA
S	STU	SMA	SYA	SVĀ	STYA	STHA	SPA	SVĀ	SKA	SMĀ	SMA	SYA	SKA	STA	SYA	SVA
H	HRA				HNI				HMA				HMA	HRI		



LIGATURES	B 13				B 14				B 15				B 16			
K	KKU	KTA	KRA	KSHYA	KTAṁ	KVA	KYA	KSHMYĀ	KTIH	KSHA			KTA	KYA	KRA	KSHAṁ
KH					KHYĀ				KHYA							
G	GGA	GNA	GYAḤ	GRA	GGA	GNĀ	GMA	GRA					GNA	GYAḤ	GRA	
GH	GHYAḤ				GHYĀ				GHNĀ				GHNA			
Ṅ	ṄGA	ṄNA	ṄMA		ṄKA	ṄGĪ			ṄKA	ṄGHA			ṄKA	ṄGĀ		
CH	CHCHAṀ	CHCHHA			CHCHHA				CHCHA	CHYA			CHCHHA			
CHH																
J	JJA	JÑA	JYE		JYA	JÑĀ			JYE	JJA			JJĀ	JÑĀ	JYA	
JH																
Ñ					ÑCHA	ÑJA										
Ṭ	ṬṬĀ				ṬṬĀ				ṬṬĀ				ṬṬA	ṬPRA		
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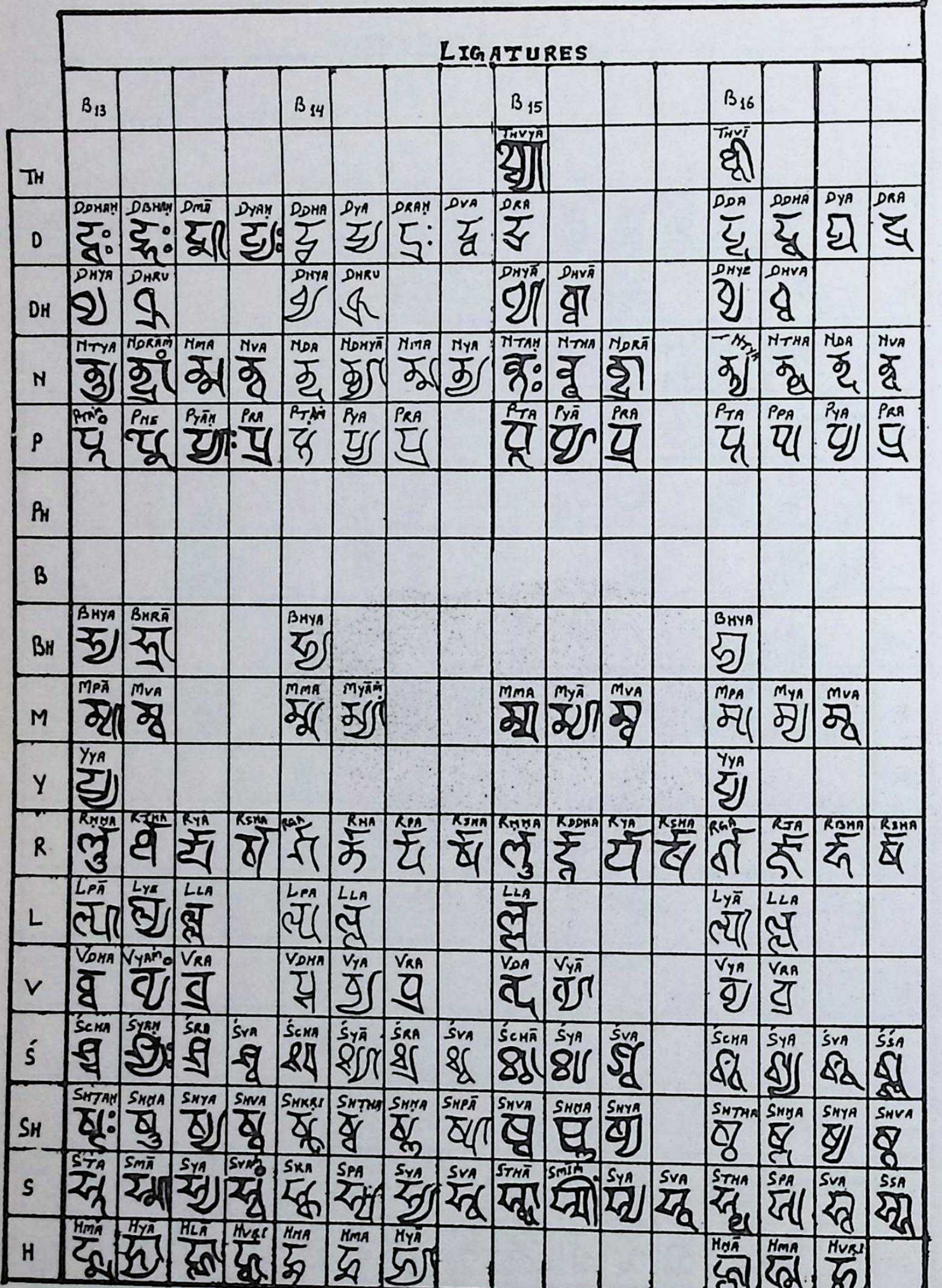
ḌH																
Ṇ	ṆCHA	ṆḌA	ṆYĀ		ṆṬHAḤ	ṆḌA	ṆYA		ṆYAṀ				ṆCHA	ṆṬHA	ṆḌA	ṆMA
T	TTA	TMA	TVA	TSA	TPA	TRA	TVA	TSA	TPRA	TYA	TRAḤ	TSA	TTHA	TPRA	TYA	TSA

9th CENTURY A.D. PLATE 60



LIGATURES

	B13				B14				B15				B16			
TH									THVYA				THVĪ			
D	DDHAṂ	DBHAṂ	DMĀ	DYAṂ	DDHA	DYA	DRAṂ	DVA	DRA				DDA	DDHA	DYA	DRA
DH	DHYA	DHRU			DHYA	DHRU			DHYĀ	DHVĀ			DHYE	DHVA		
N	NTYA	NDRAṀ	NMA	NVA	NDA	NDHYĀ	NMA	NYA	NTAṂ	NTHA	NDRĀ		NTYA	NTHA	NDA	NVA
P	PTAṀ	PHE	PYĀṂ	PRA	PTĀṀ	PYA	PRA		PTA	PYĀ	PRA		PTA	PPA	PYA	PRA
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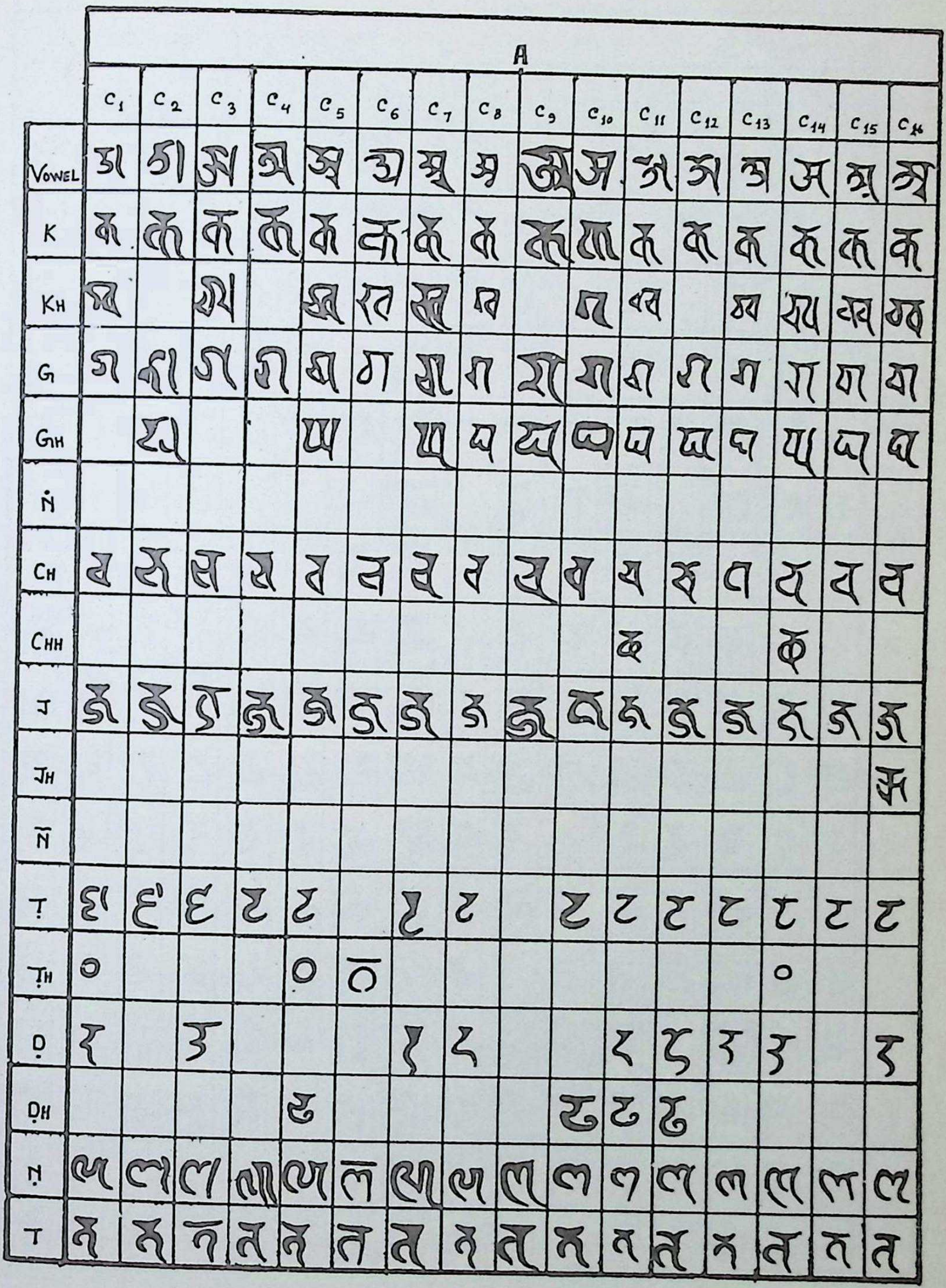
BH	BHYA	BHRĀ			BHYA								BHYA			
M	MPĀ	MVA			MMA	MYĀṀ			MMA	MYĀ	MVA		MPA	MYA	MVA	
Y	YYA												YYA			
R	RMMA	RJHA	RYA	RSHA	RGA	RHA	RPA	RSHA	RMMA	RDDHA	RYA	RSHA	RGA	RJA	RBHA	RSHA
L	LPĀ	LYE	LLA		LPA	LLA			LLA				LYĀ	LLA		
V	VDHA	VYAṀ	VRA		VDHA	VYA	VRA		VDA	VYĀ			VYA	VRA		
Ś	ŚCHA	ŚYAṂ	ŚRA	ŚVA	ŚCHA	ŚYĀ	ŚRA	ŚVA	ŚCHĀ	ŚYA	ŚVA		ŚCHA	ŚYA	ŚVA	ŚŚA
SH	SHṬAṂ	SHṆA	SHYA	SHVA	SHKRI	SHṬHA	SHṆA	SHPĀ	SHVA	SHṆA	SHYA		SHṬHA	SHṆA	SHYA	SHVA
S	STA	SMĀ	SYA	SVAṀ	SKA	SPA	SYA	SVA	STHĀ	SMIṀ	SYA	SVA	STHA	SPA	SVA	SSA
H	HMĀ	HYA	HLĀ	HVṚI	HMA	HMA	HYĀ						HṆĀ	HMA	HVṚI	

References for Plates 61–90
(10th Century)

Table	Inscription	Date in A.D.	Reference
C_1	Nowgong plates of Balavarmā	—	*KŚ*, Pls., b. pp. 72–73 & 76–77.
C_2	Bālangir Museum plates of Mahāśivagupta	—	*JASL*, XIX, Pls. b. pp. 124–25.
C_3	Chicācole plates of Madhu-Kāvārṇṇa	923	*JBORS*, XVIII, Pls. b. pp. 294–95.
C_4	Bengāl Asiatic Society's plate of Vināyakapāla	931	*IA*, XV, Pl. f. p., 140.
C_5	Dewal Praśasti of Lalla	922	*EI*, I, Pl. f. p., 76.
C_6	Bharat Kala Bhavan plate of Harirāja	983	*EI*, XXXI, Pl. f. p., 312.
C_7	Khajurāho inscription of Yaśovarmā	954	*EI*, I, Pl. f. p., 122.
C_8	Kāritalāi inscription of Lakshmaṇa II	—	*CII*, IV. Pl. XXXII.
C_9	Mālava plates of Vākpati	974	*IA*, VI, Pls. f. pp. 51 & 52.
C_{10}	Śaraṇeśvara Temple inscription of Allaṭ	953	*IA*, LVIII, Pl. f. p., 161.
C_{11}	Harsha inscription of Vigraharāja	973	*EI*, II, Pl. f. p., 120.
C_{12}	Bālerā plates of Mūlarāja I	994	*EI*, X, Pl. f. p., 78.

C_{13}	Two Harsol grants of Sīyaka	948	*EI*, XIX, Pls. b. pp. 242–43.
C_{14}	Bagumrā plates of Indra III	914	*EI*, IX, Pls. b. pp. 30–31 & 34–35.
C_{15}	Deoli plates of Kṛishṇa III	940	*EI*, V, Pls. b. pp. 194–95.
C_{16}	Janjirā plates of Aparājita	993	*CII*, VI, Pls. XIII–XVII.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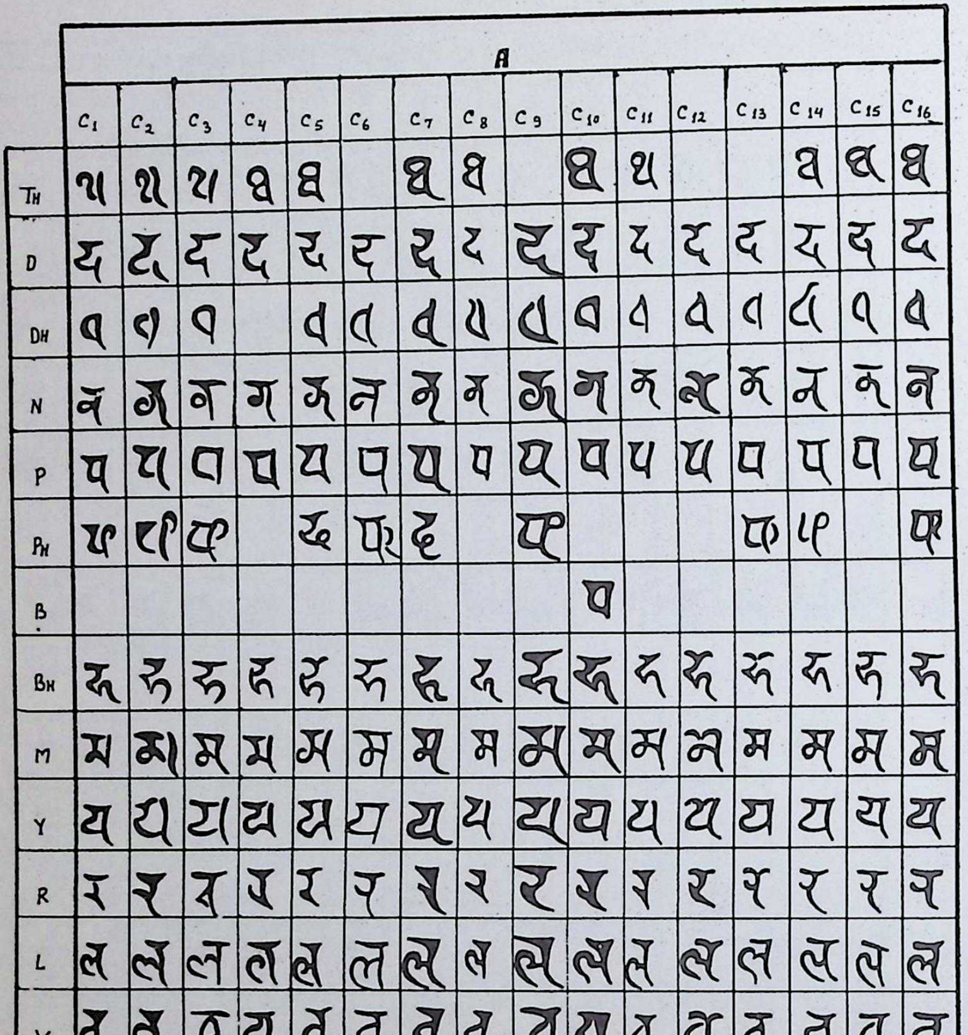
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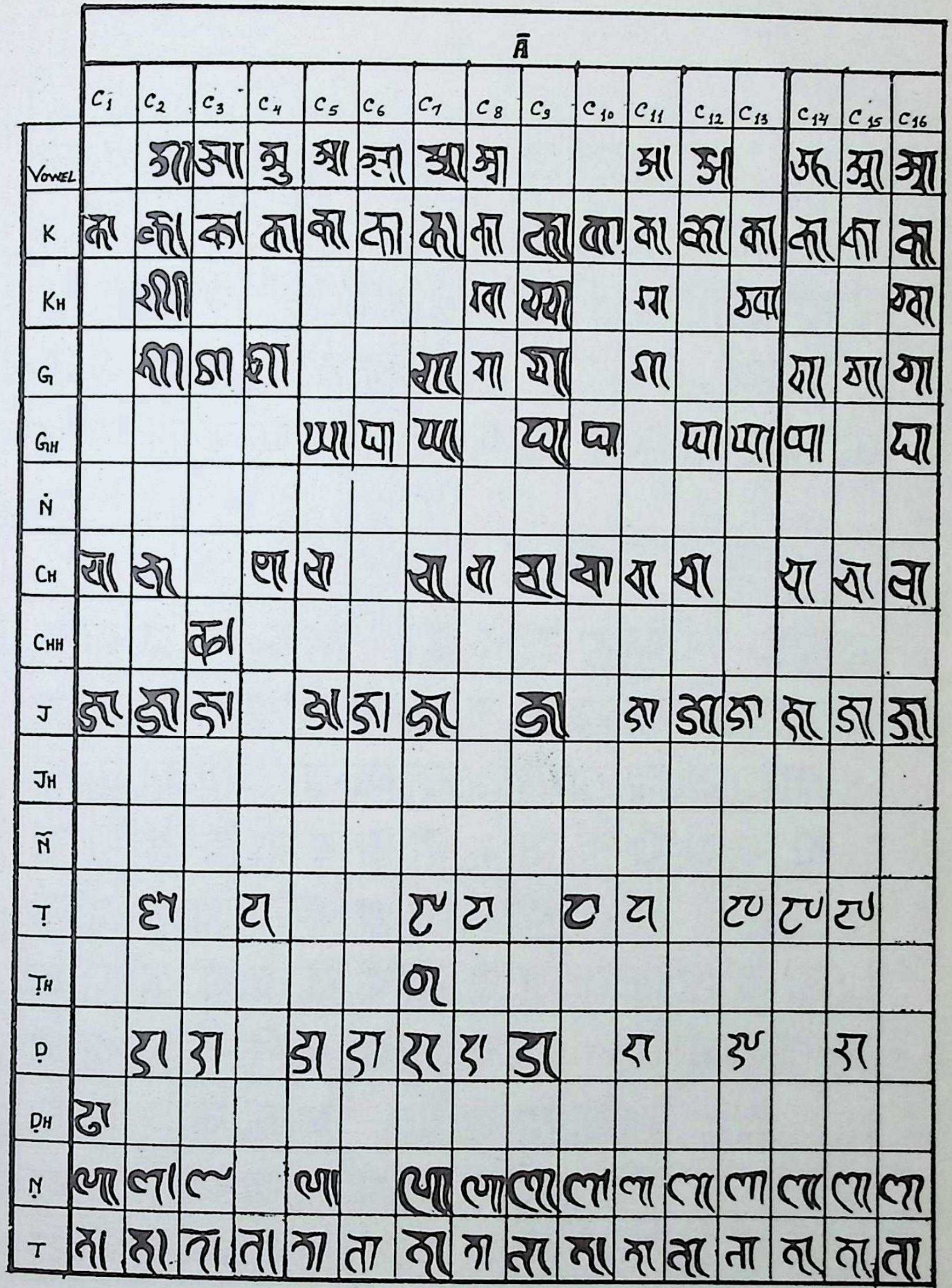
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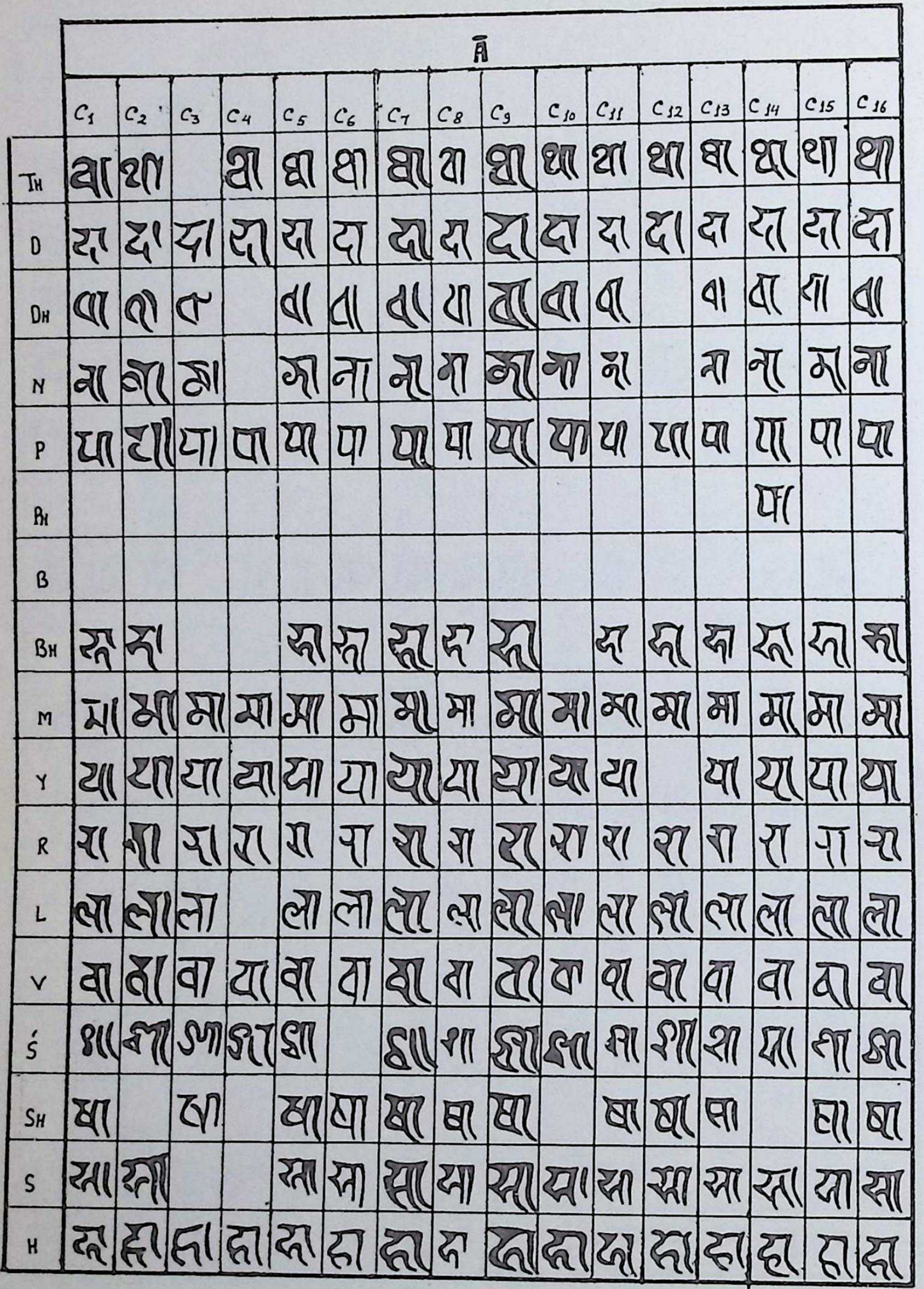
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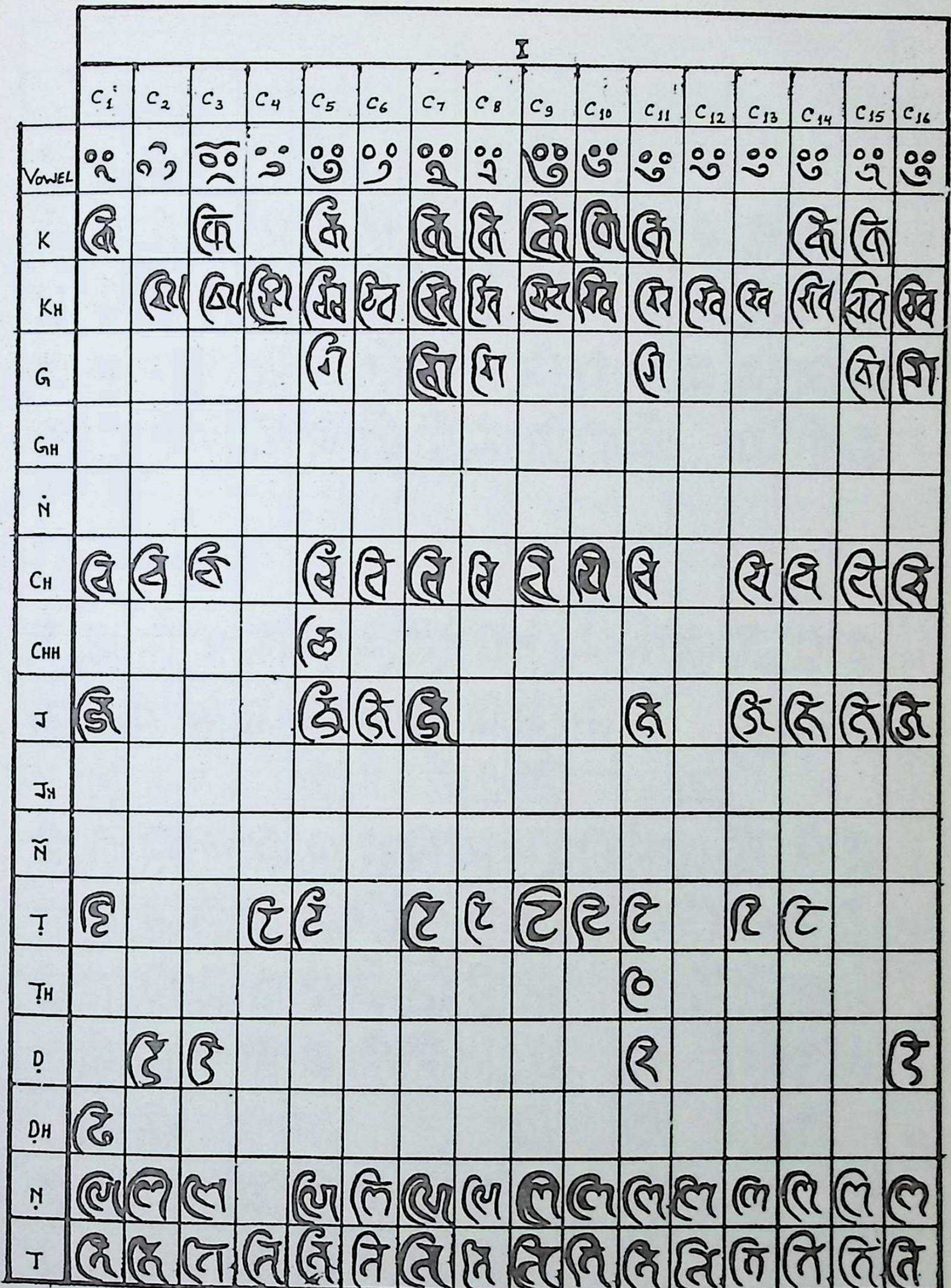
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PLATE 66

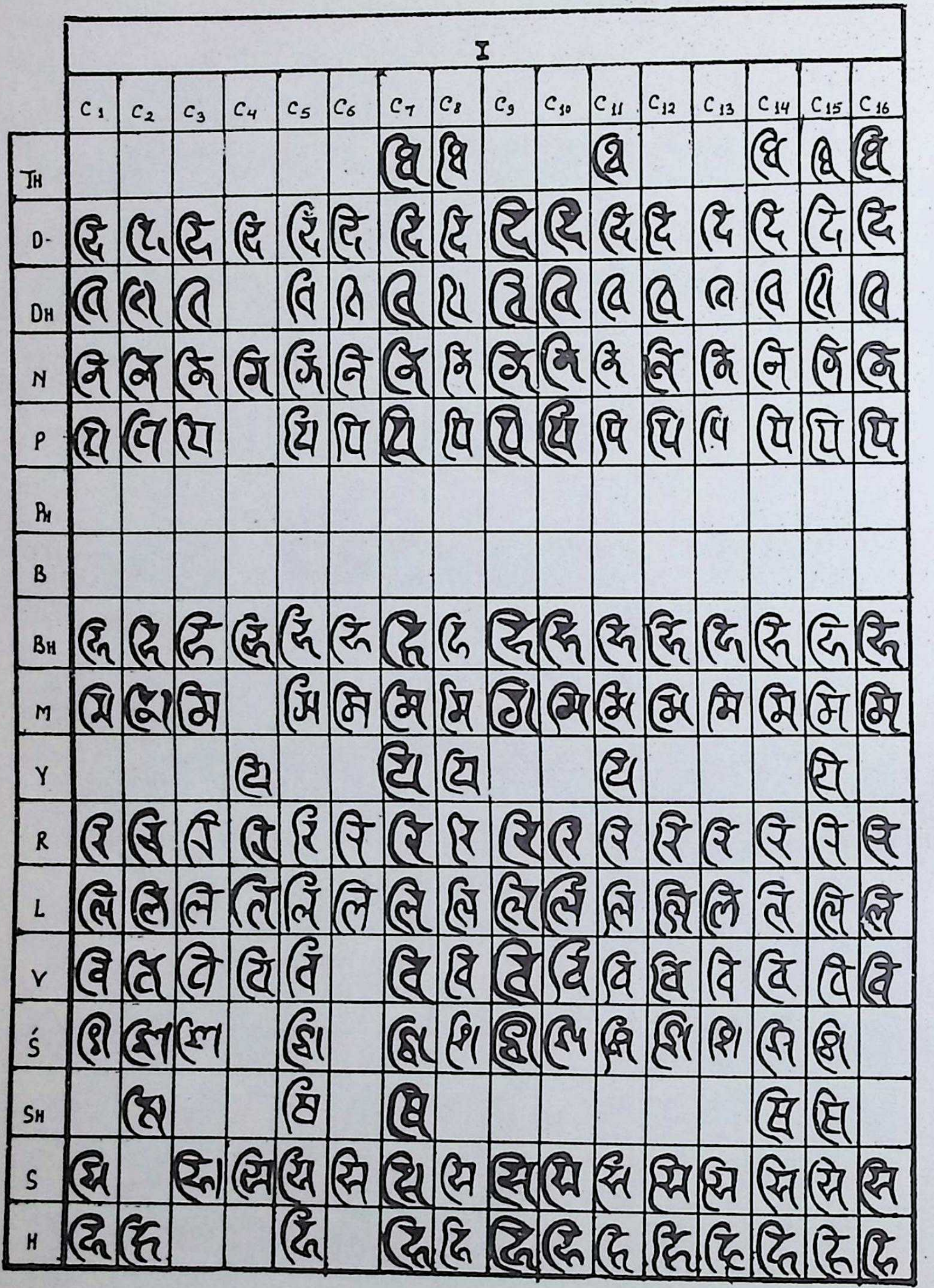
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PLATE 67

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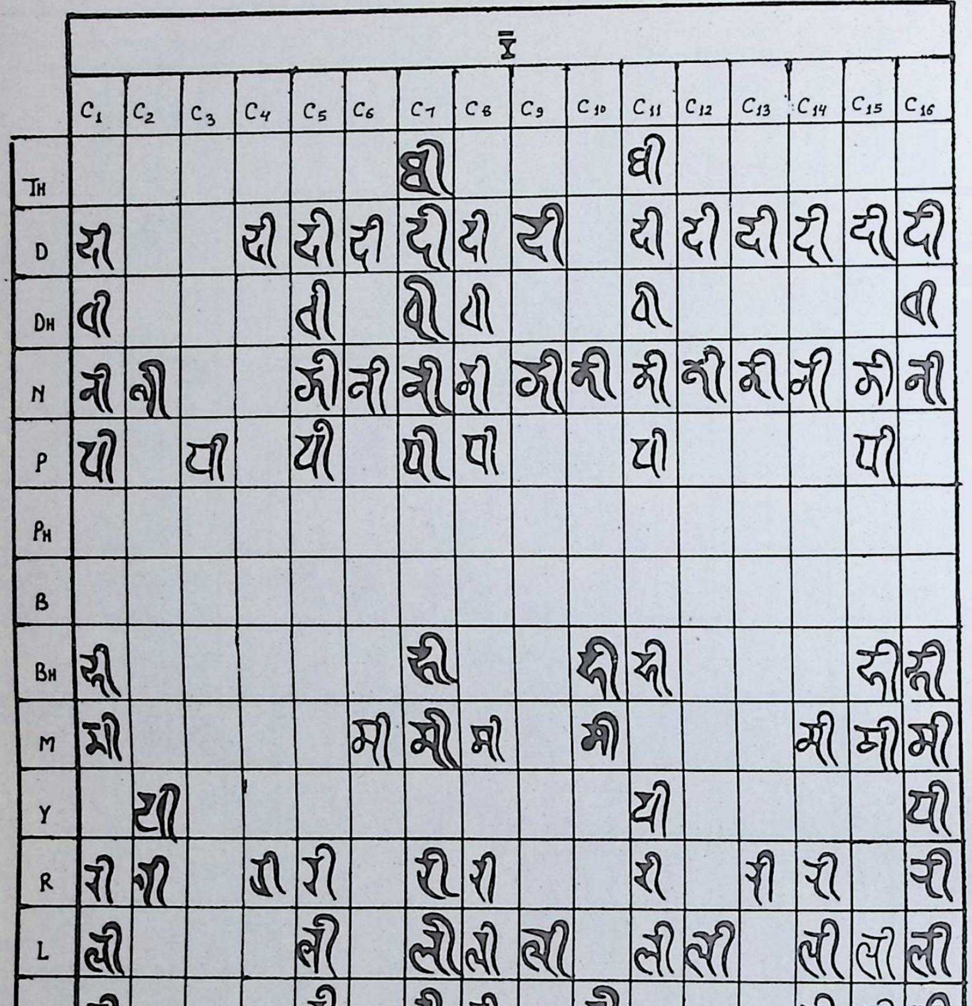
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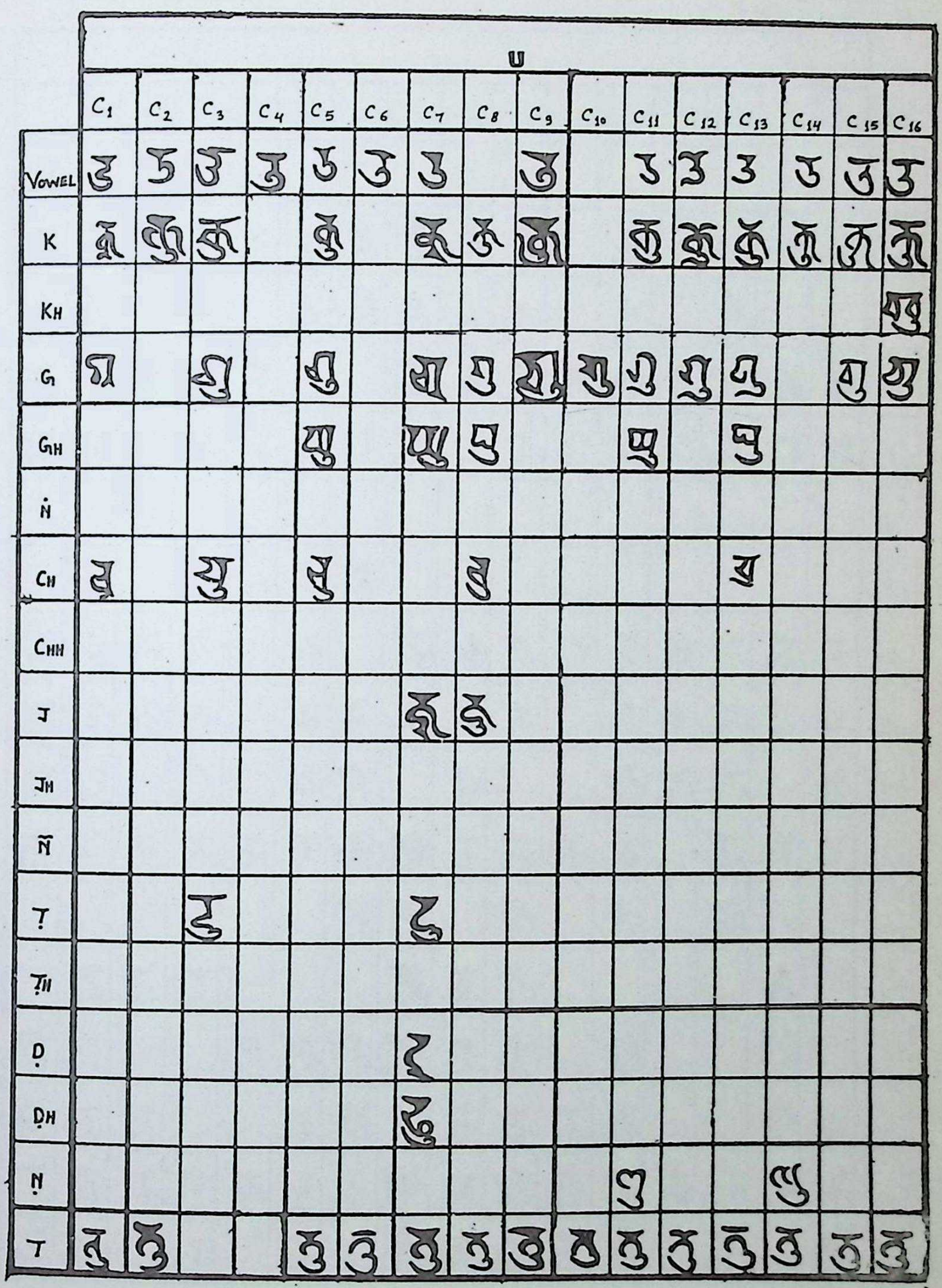
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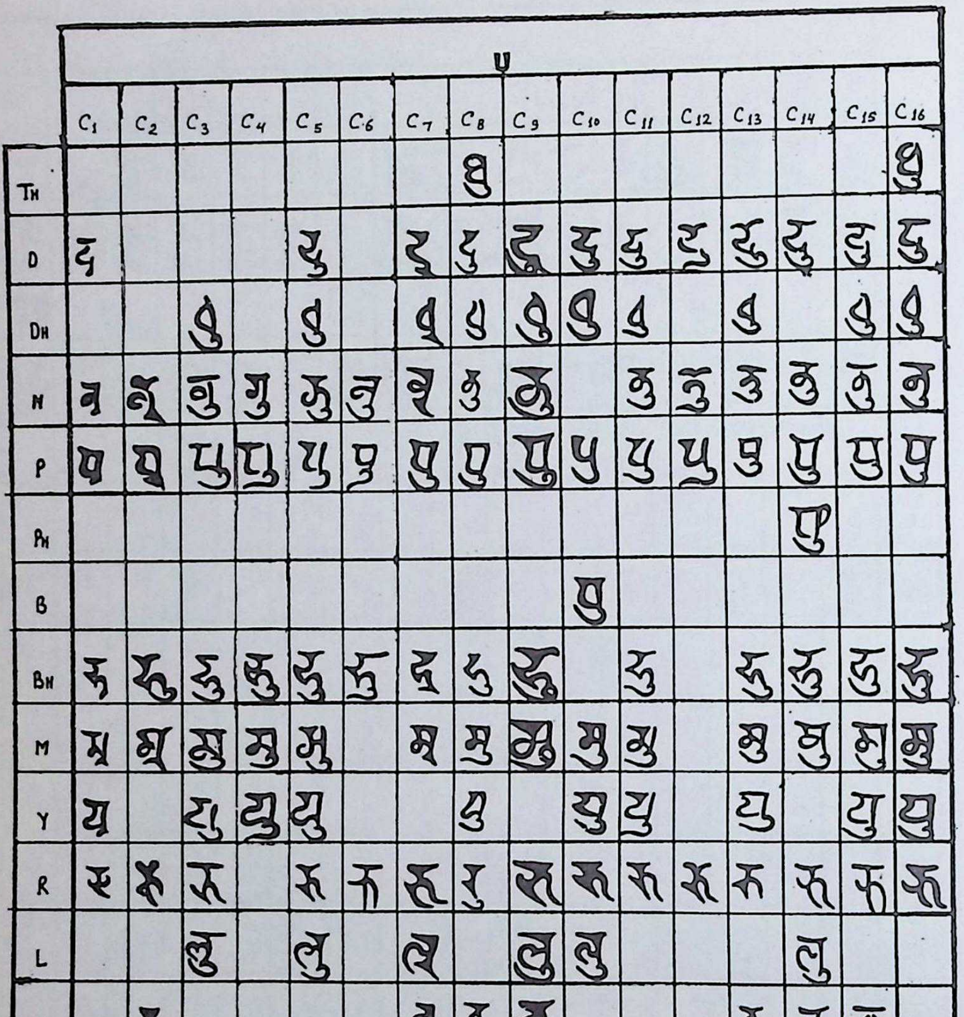
PLATE 70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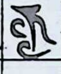
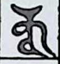
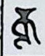
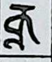
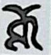
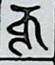
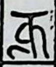
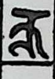
K																
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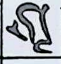
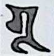
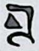
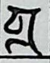
G																
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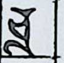
CH																
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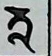
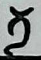
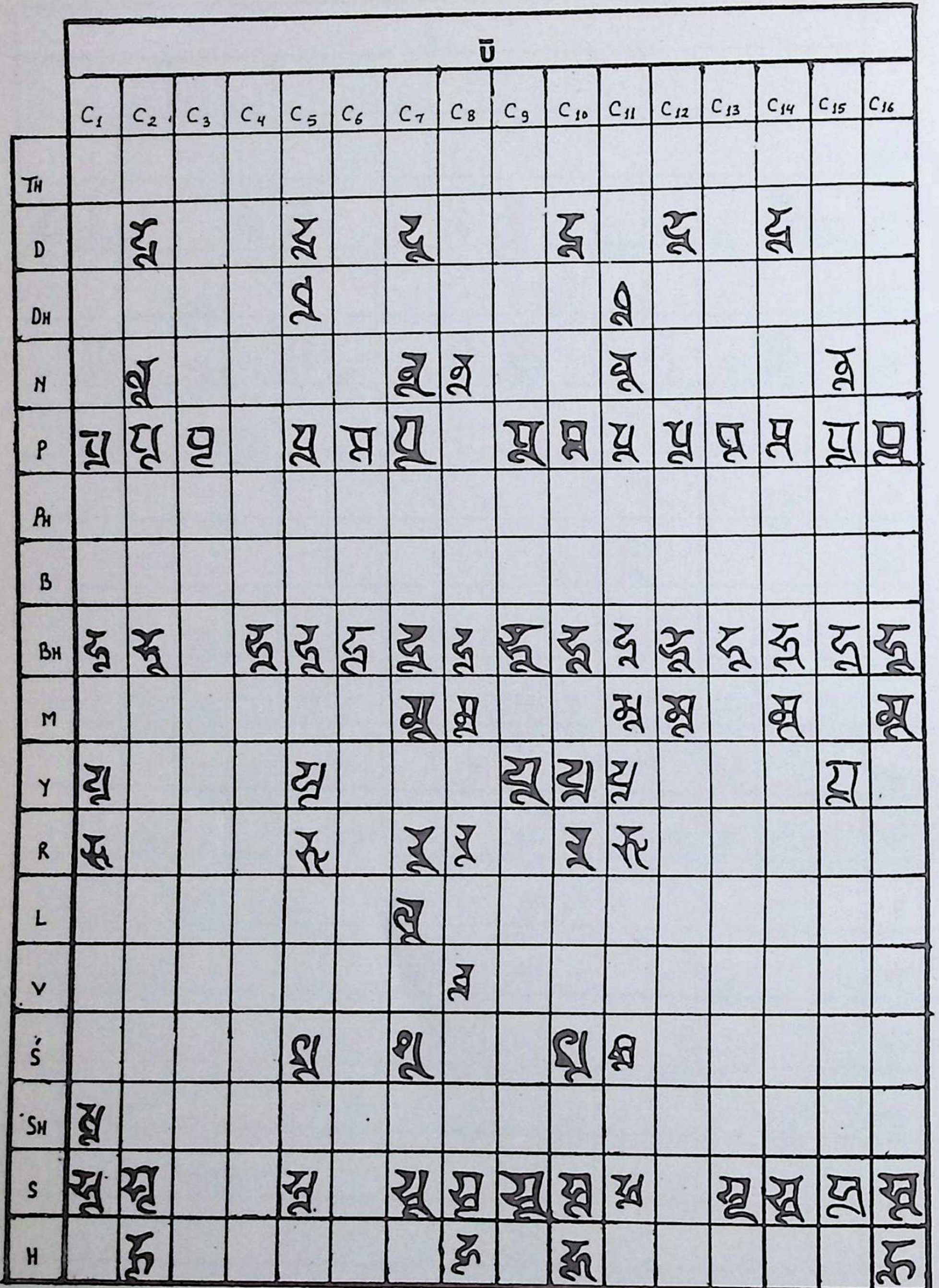
T																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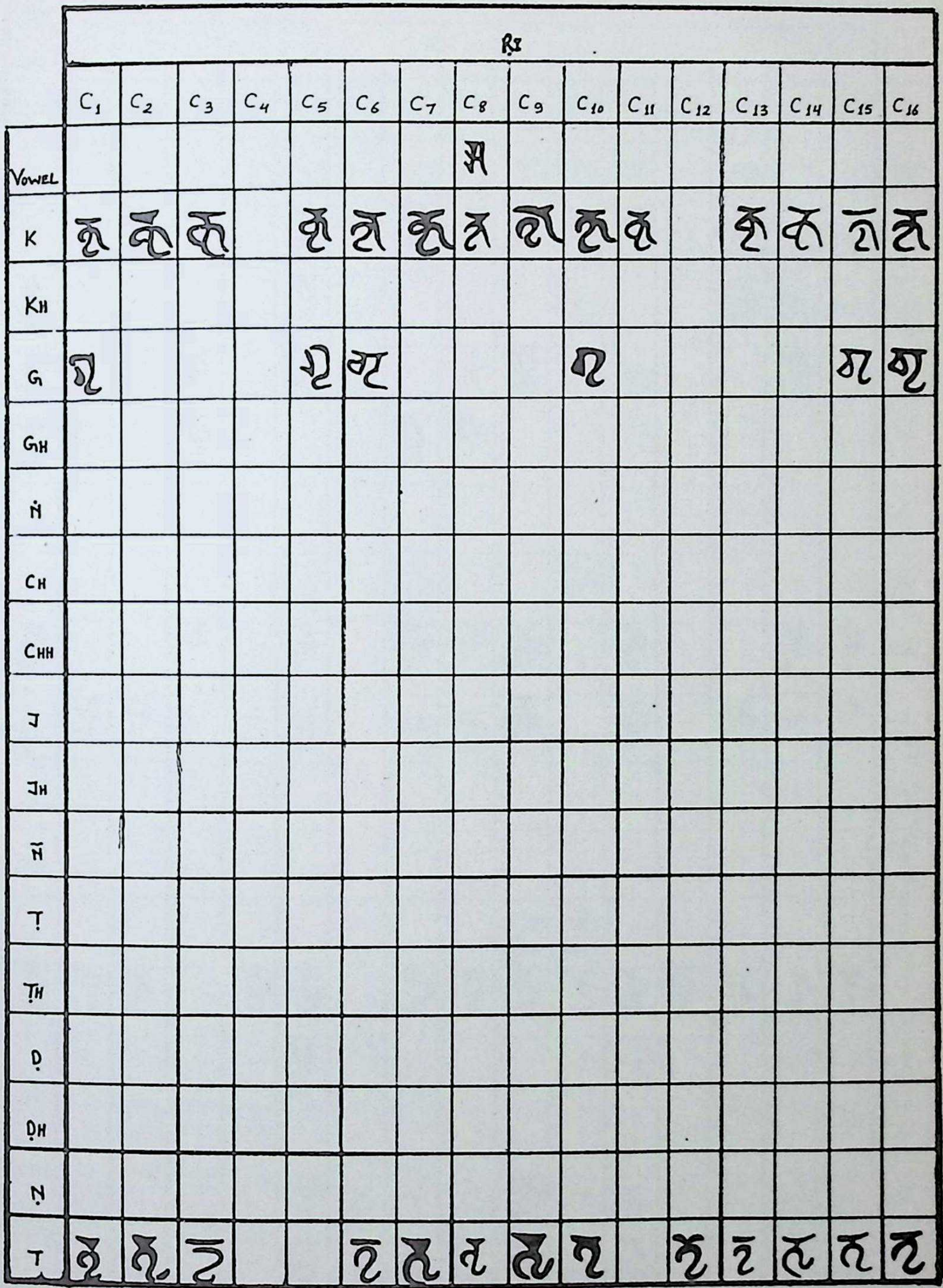
10th CENTURY A.D.

PLATE 73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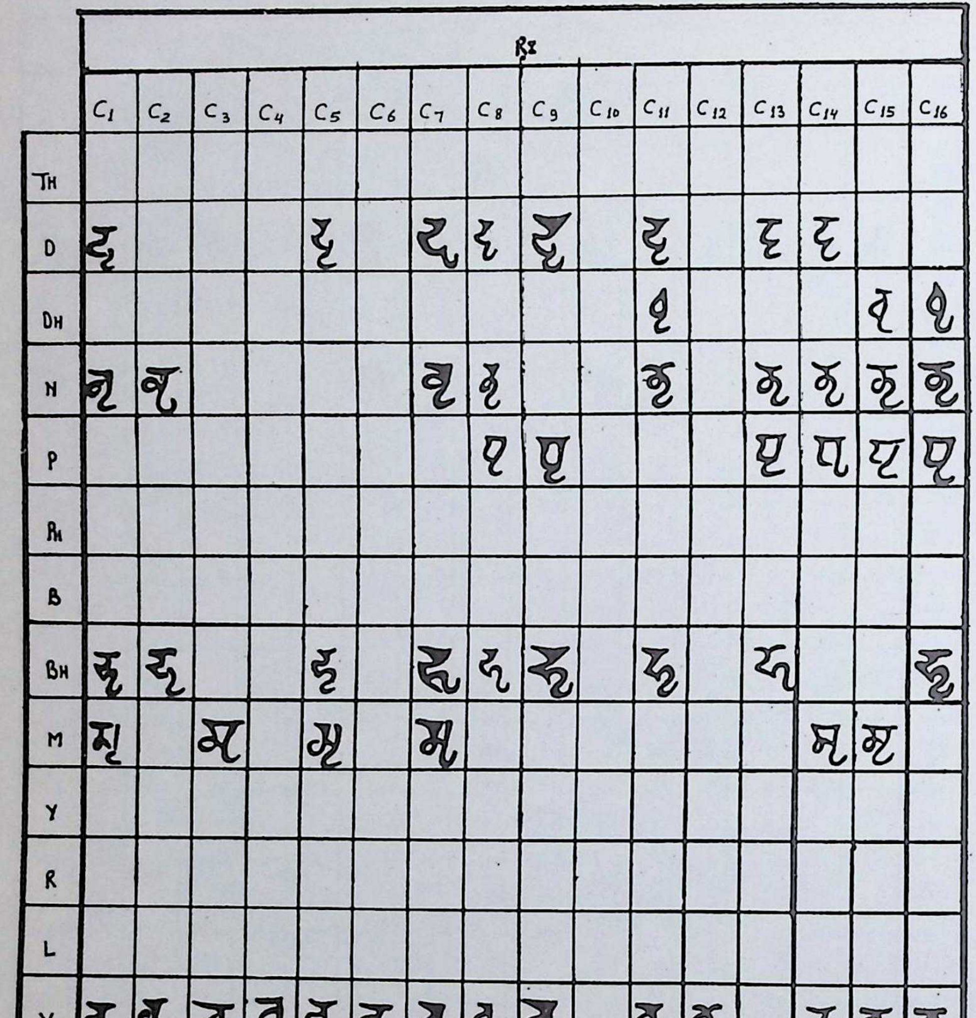
10th CENTURY A.D.

PLATE 74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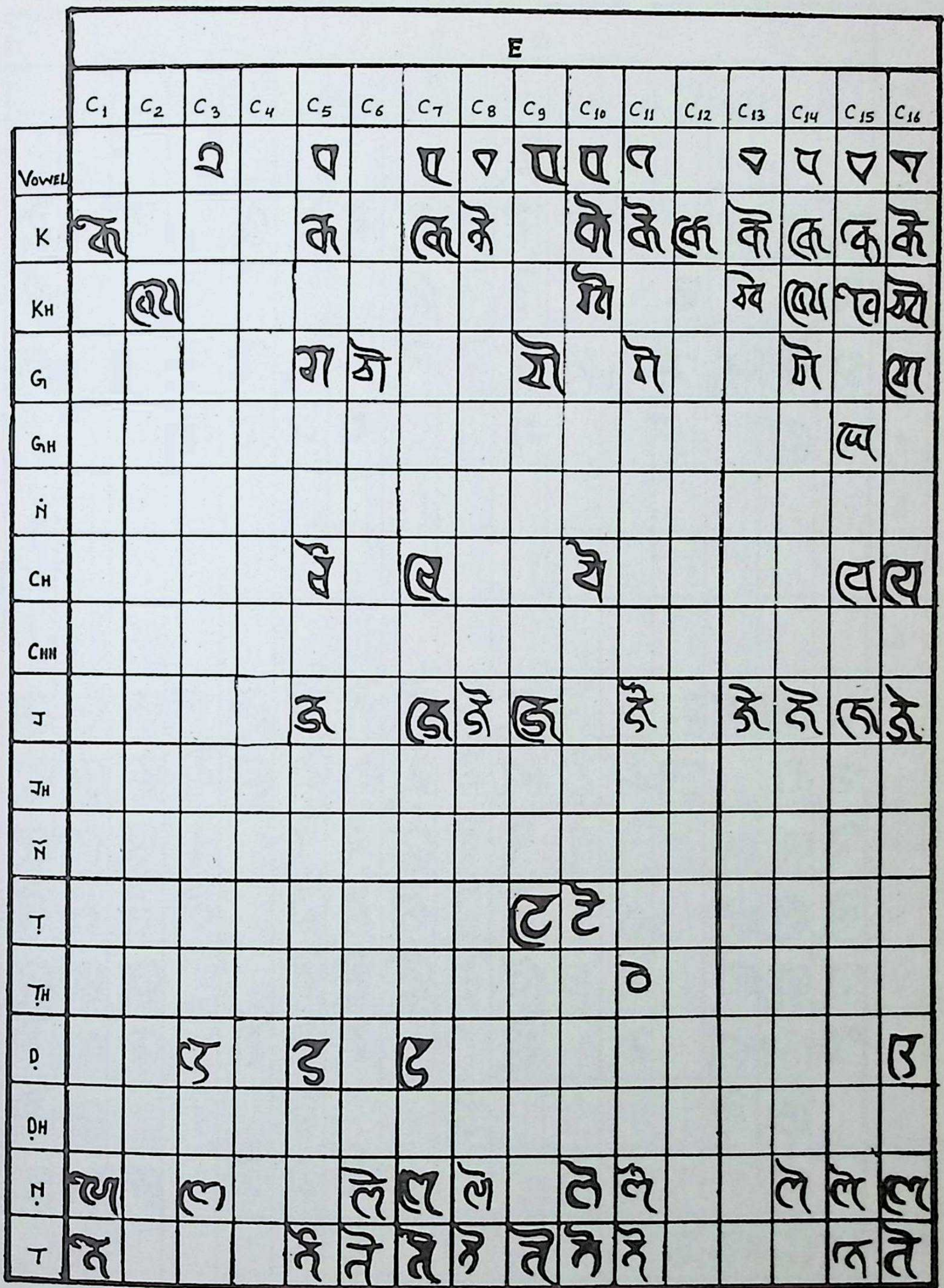
10th CENTURY A.D. PLATE 75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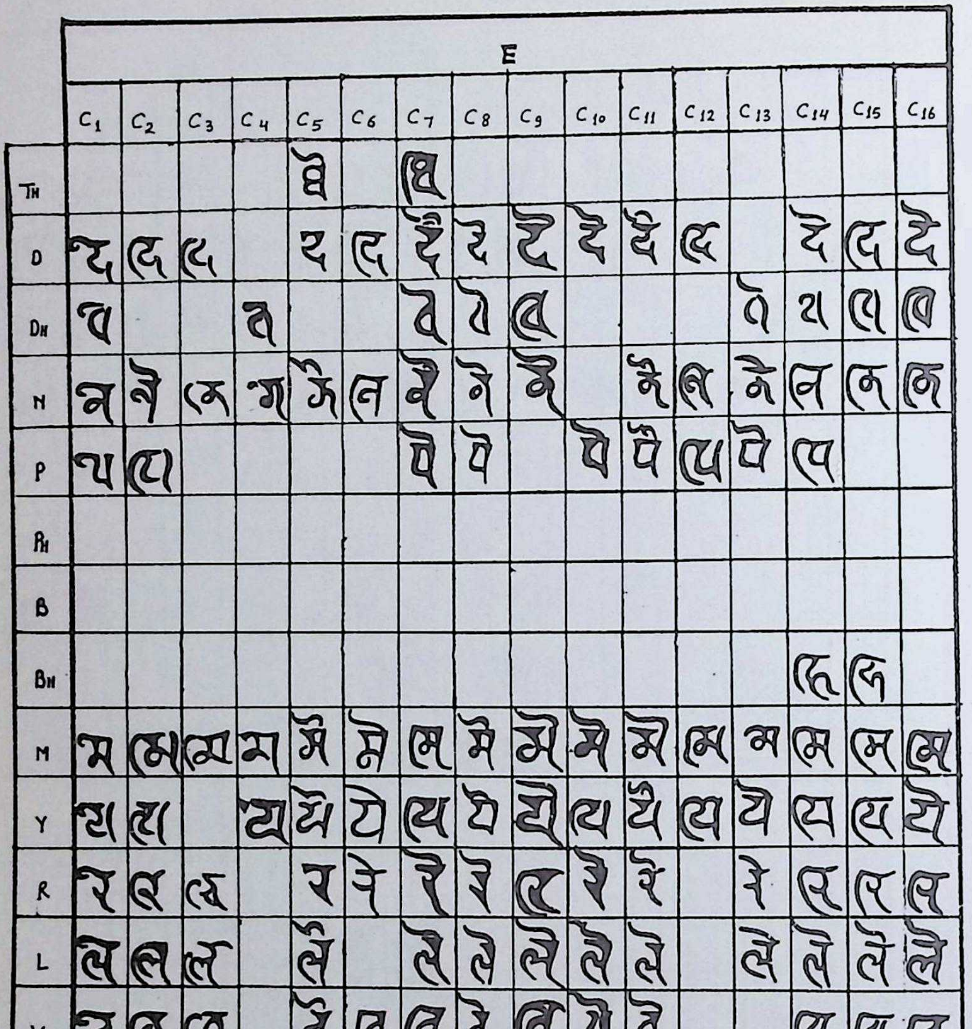
10th CENTURY A.D.

PLATE 76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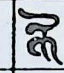
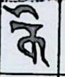
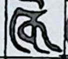
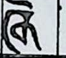
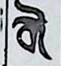
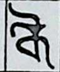
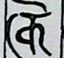
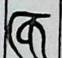
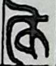
K																
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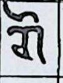
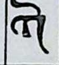
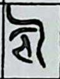
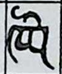
G																
GH																
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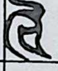
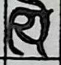
CH																
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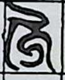
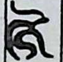
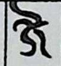
J																
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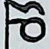
ṬH																
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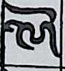
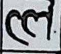
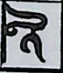
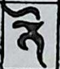
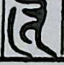
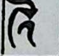
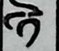
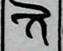
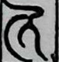
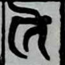
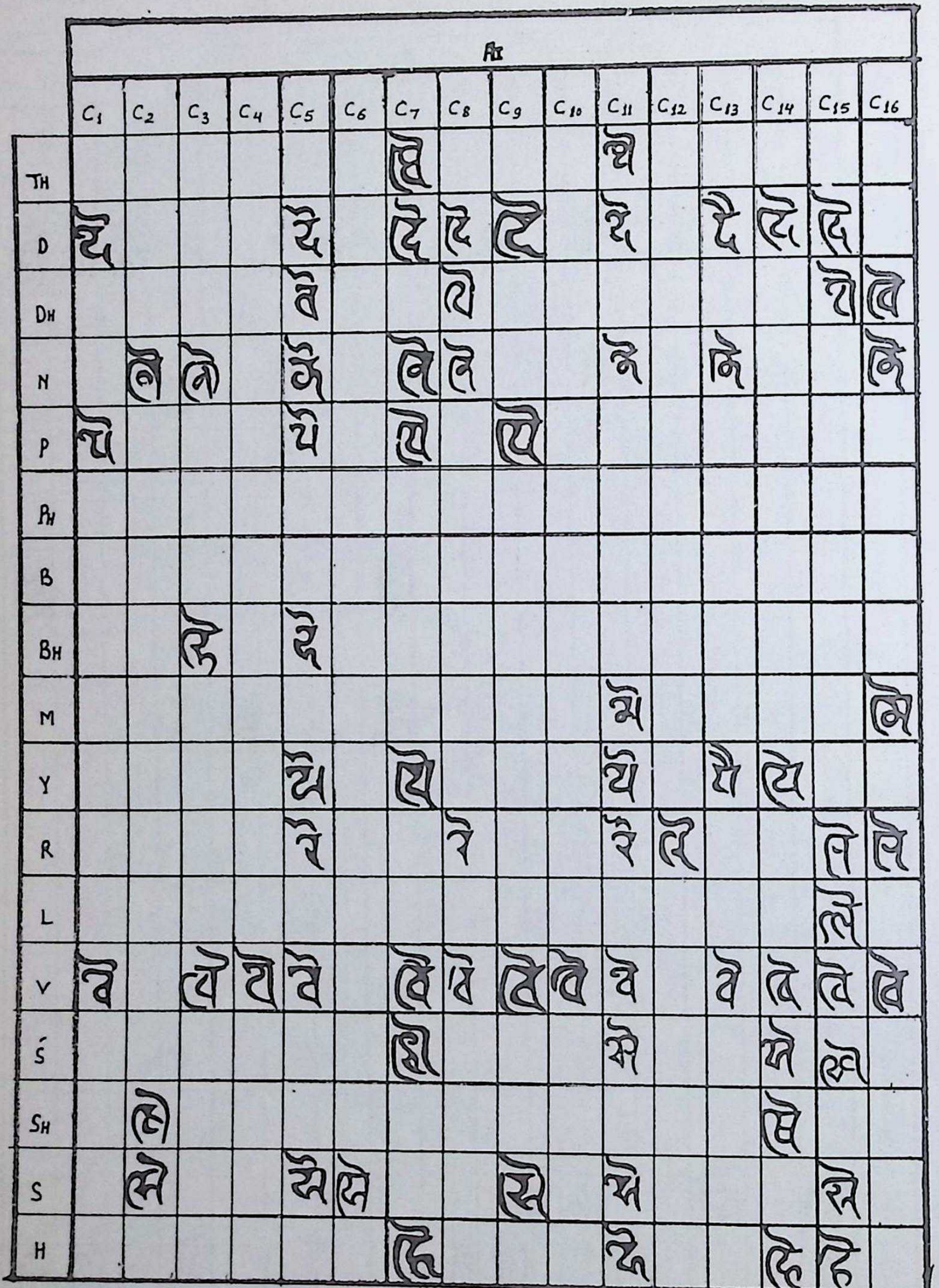
Ṇ																
T																

PLATE 78

10th CENTURY A.D.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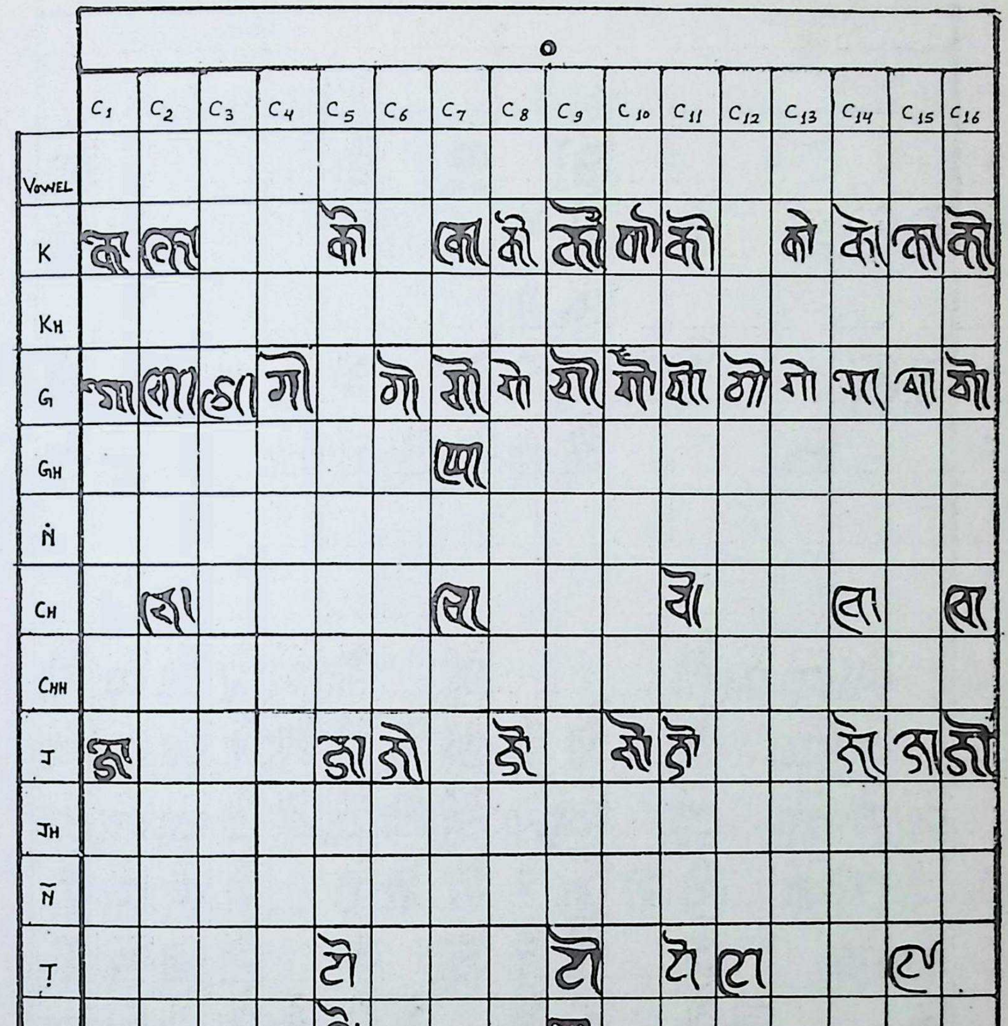
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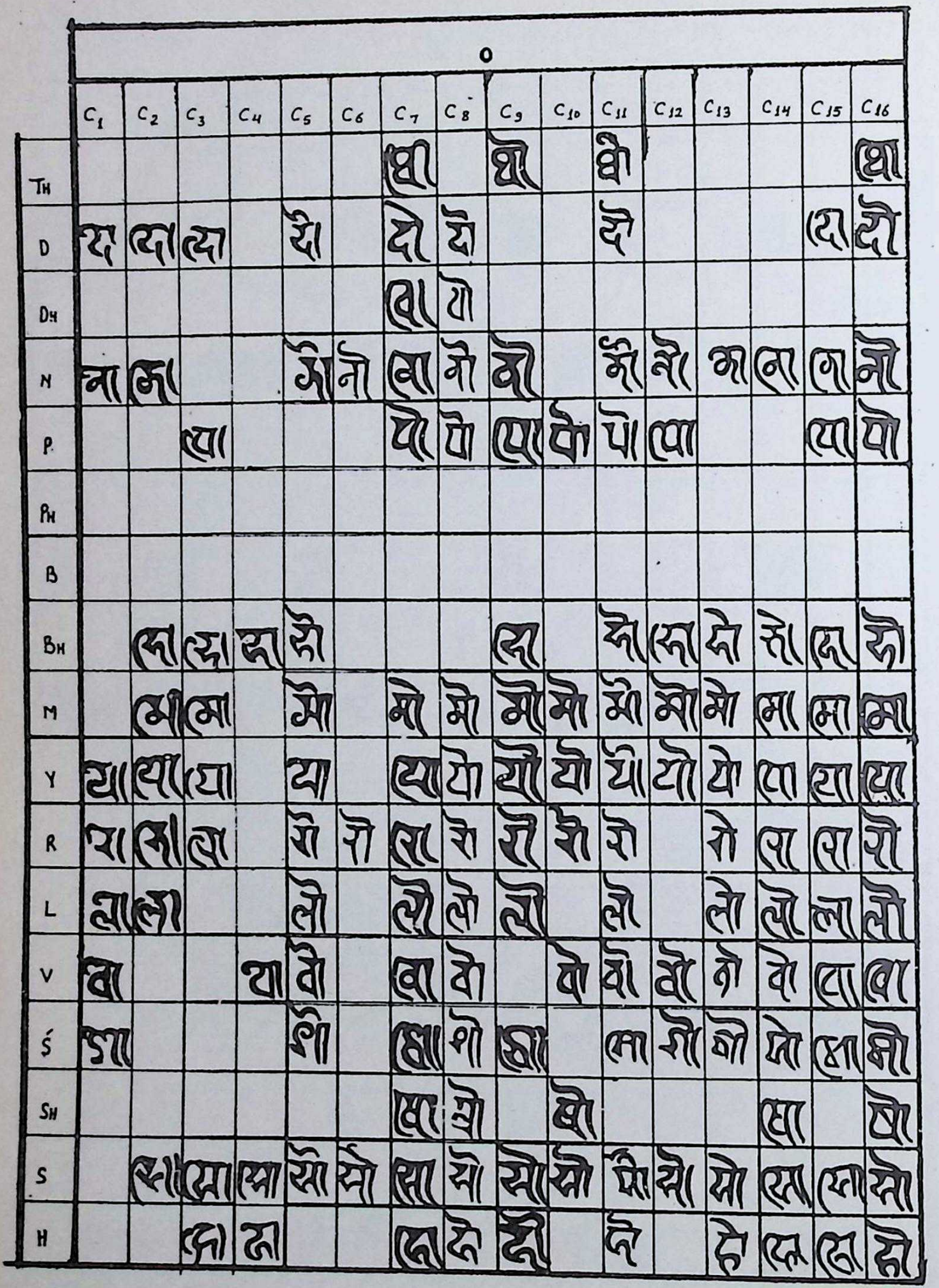
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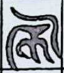
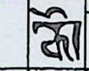
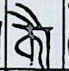
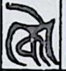
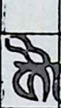
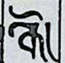
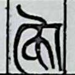
K																
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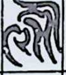
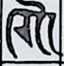
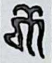
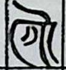
G																
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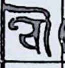
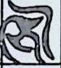
CH																
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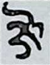
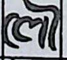
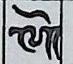
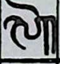
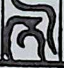
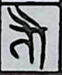
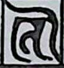
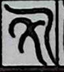
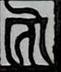
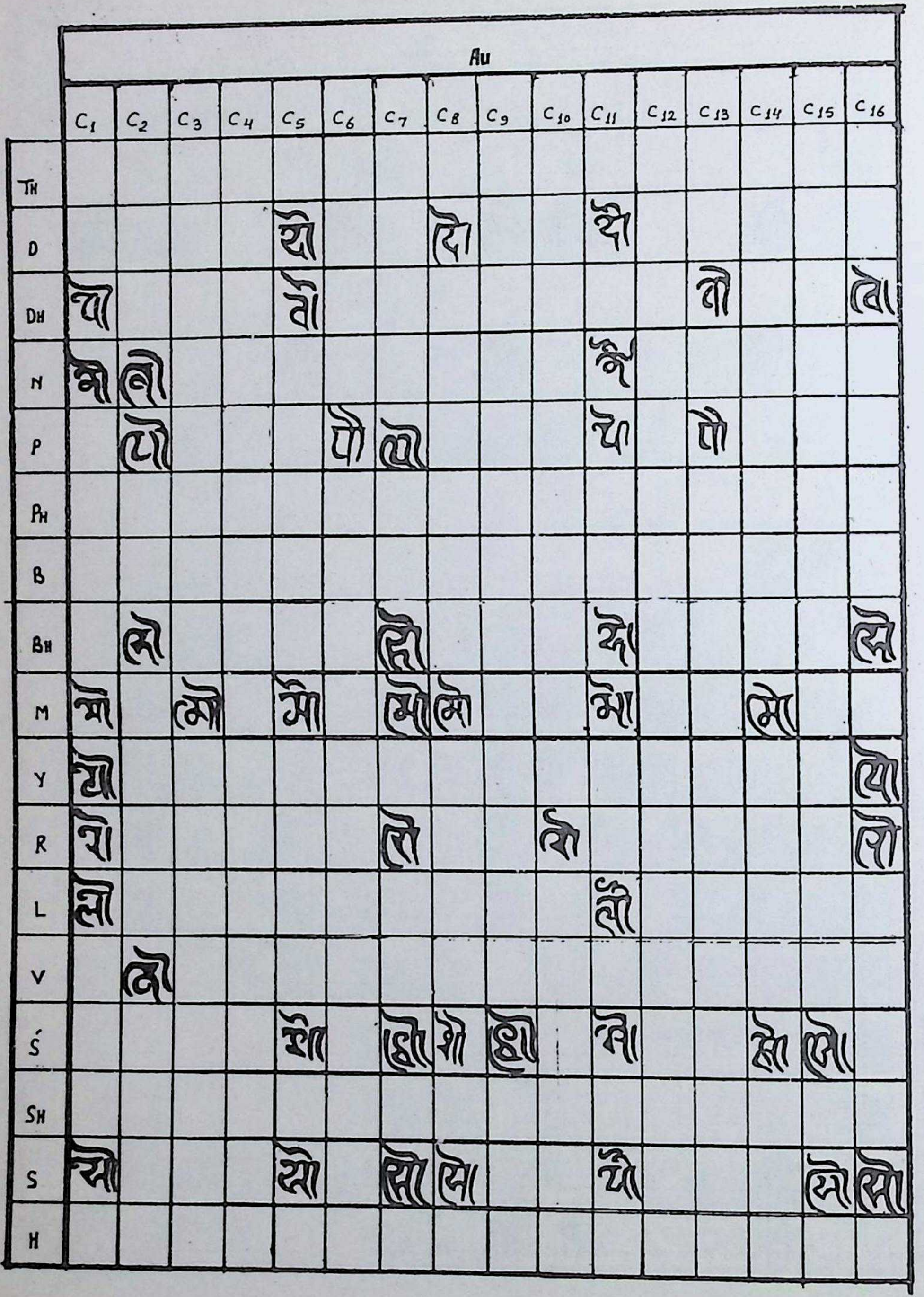
J																
JH																
Ñ																
Ṭ																
ṬH																
Ḍ																
ḌH																
Ṇ																
T																


Au
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C4
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C7
C8
C9
C10
C11
C12
C13
C14
C15
C16
TH
D
DH
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PH
B
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M
Y
R
L
V
Ś
SH
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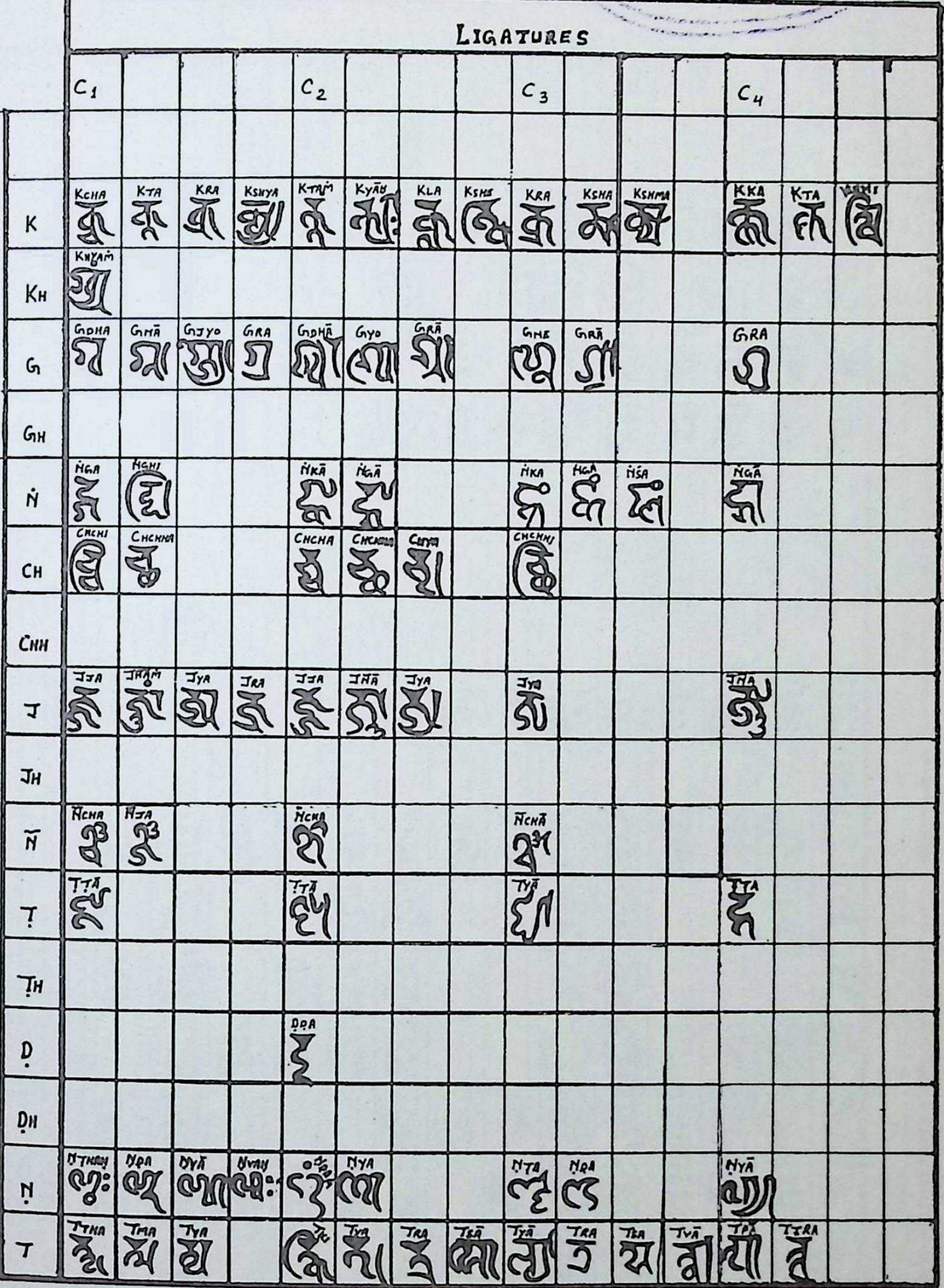
H

पुस्तकालय
पुस्तकालय
गुरुकुल कांगड़ी विश्वविद्यालय

10th CENTURY A.D. PLATE 83



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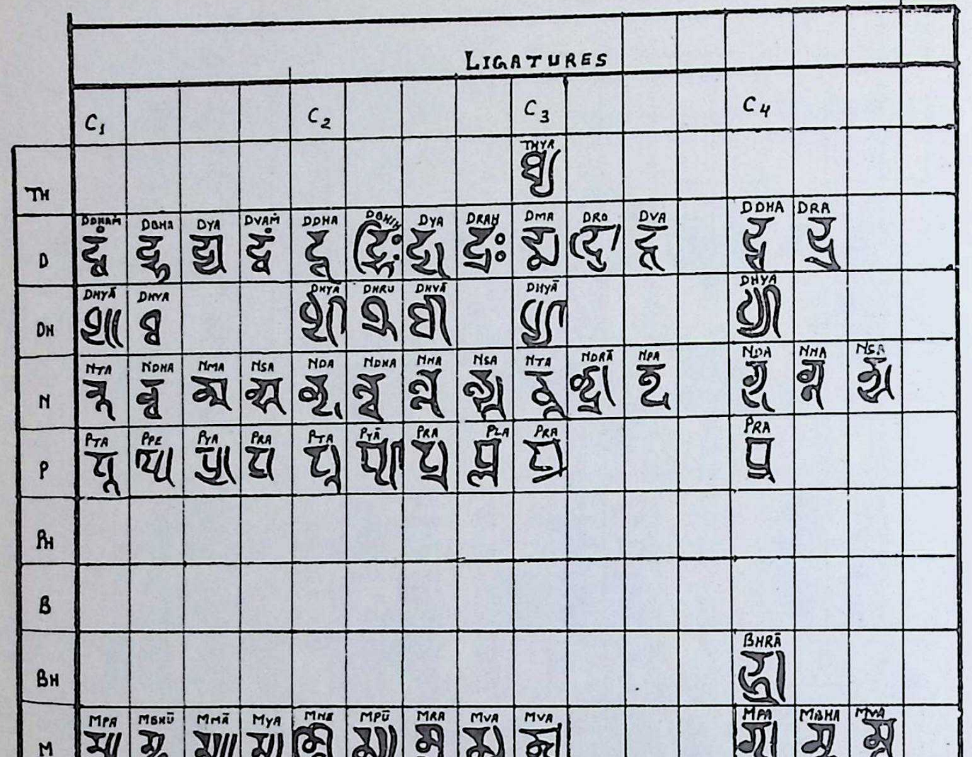
KH	KHYAṀ															
G	GDHA	GMĀ	GJYO	GRA	GDHĀ	GYO	GRĀ		GME	GRĀ			GRA			
GH																
Ṅ	ṄGA	ṄGHI			ṄKĀ	ṄGĀ			ṄKA	ṄGA	ṄSA		ṄGĀ			
CH	CHCHI	CHCHHA			CHCHA	CHCHHA	CHYA		CHCHHI							
CHH																
J	JJA	JHAṀ	JYA	JRA	JJA	JÑĀ	JYA		JYA				JÑA			
JH																
Ñ	ÑCHA	ÑJA			ÑCHA				ÑCHĀ							
Ṭ	ṬṬĀ				ṬṬĀ				ṬYĀ				ṬṬA			
ṬH																
Ḍ					ḌḌA											
ḌH																
Ṇ	ṆṬHAṀ	ṆḌA	ṆYĀ	ṆVAṀ	[illegible]	ṆYA			ṆṬA	ṆḌA			ṆYĀ			
T	TTHA	TMA	TYA		[illegible]	TYA	TRA	TSĀ	TYĀ	TRA	TSA	TVĀ	TPĀ	TTRA		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DYA
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DMA
DRO
DVA
DDHA
DRA
DH
DHYĀ
DHYA
DHYA
DHRU
DHYĀ
DHYĀ
DHYA
N
NTA
NDHA
NMA
NSA
NDA
NDHA
NNA
NSA
NTA
NDRĀ
NPA
NDA
NNA
NSA
P
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PPE
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PLA
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M
MPA
MBHŪ
MMĀ
MYA
MNE
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MRA
MVA
MVA
MPA
MBHA
MVA
Y
YYA
R
RMUA
RDDHA
RMM
RVVA
RGA
RMMA
RDDA
RNA
RKA
RGA
RMMA
RVVA
RDBHŪ
RVVA
L
LMA
LLA
LGA
LLA
LMI
LLA
V
VYA
VYĀ
VJA
VDĀ
VYA
VRA
VYĀ
VRA
Ś
ŚCHA
ŚYE
ŚRA
ŚVA
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ŚYA
ŚCHA
ŚMA
ŚYA
ŚVA
ŚCHA
SH
SHKI
SHṬA
SHṬHAṂ
SHYA
SHṬA
SHṬHĀ
SHMA
SHYA
SHṬHĀ
SHṬHĀ
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S
STA
SKHA
SMI
SYA
SCHA
STHAṂ
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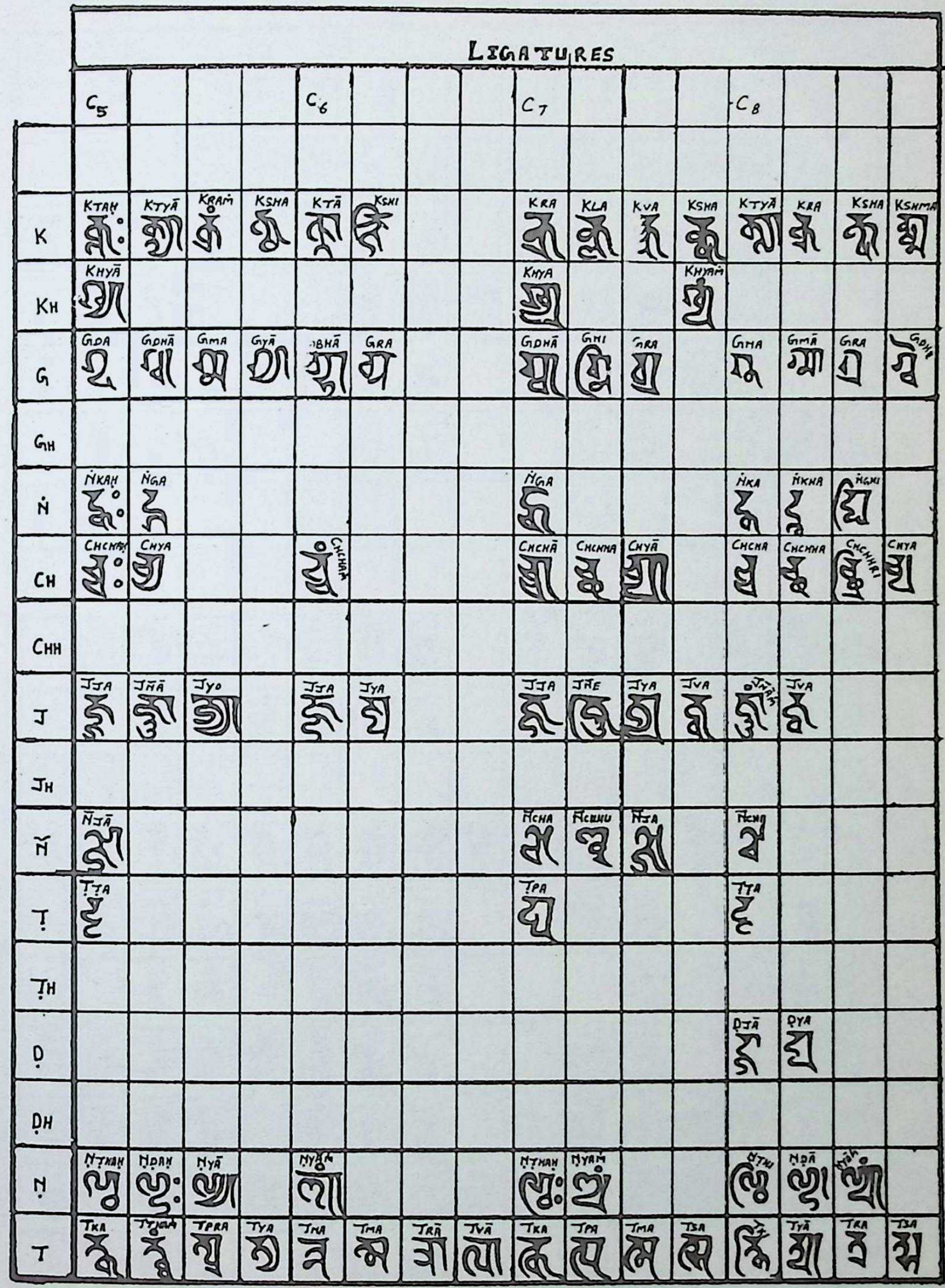

LIGATURES

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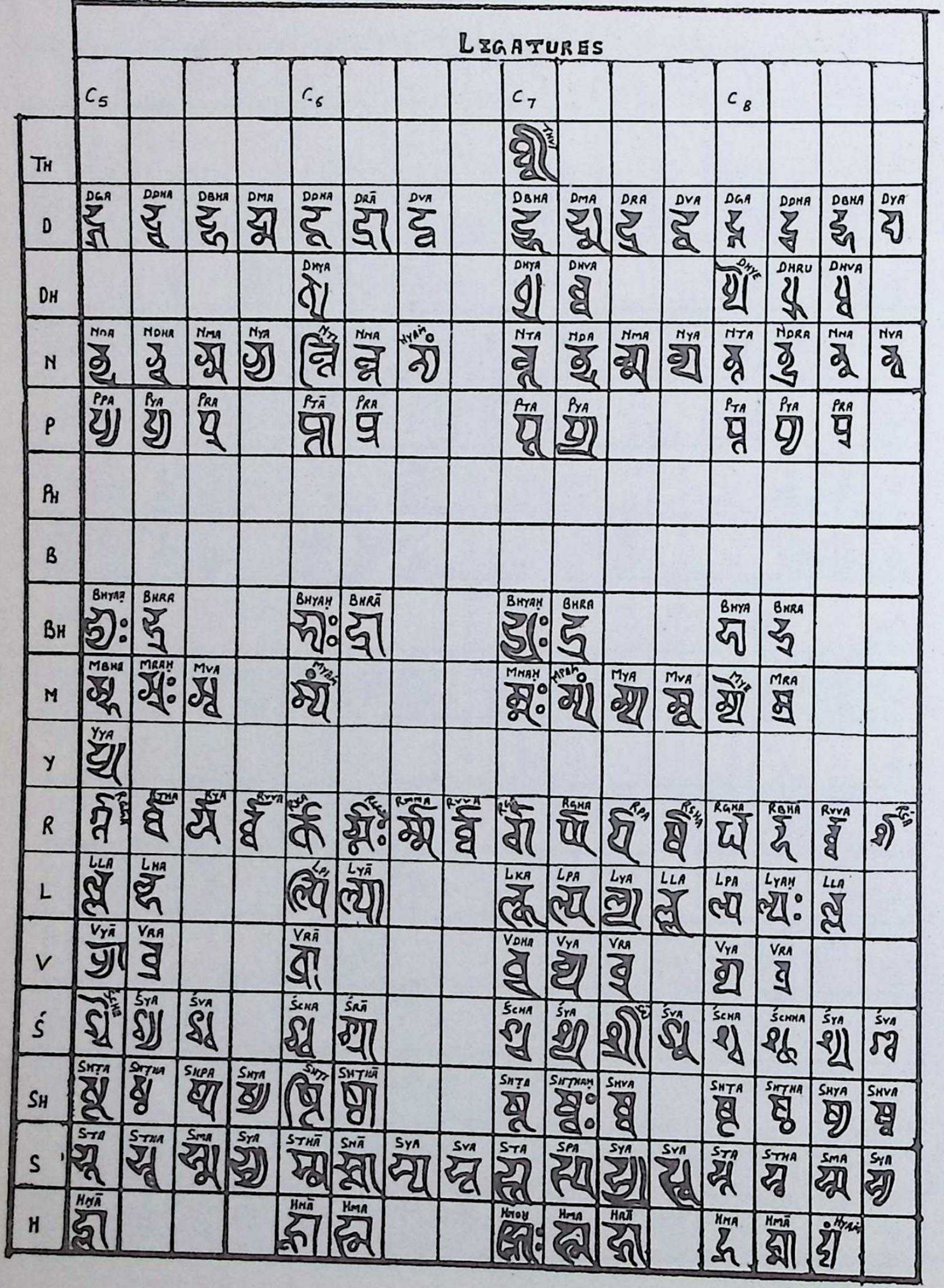
KH	KHYĀ								KHYA			KHYAṀ				
G	GDA	GDHĀ	GMA	GYĀ	BHĀ	GRA			GDHĀ	GHI	GRA		GMA	GMĀ	GRA	GDHI
GH																
Ṅ	ṄKAḤ	ṄGA							ṄGA				ṄKA	ṄKHA	ṄGHI	
CH	CHCHAḤ	CHYA			CHCHĀ				CHCHĀ	CHCHHA	CHYĀ		CHCHA	CHCHHA	CHCHHRI	CHYA
CHH																
J	JJA	JÑĀ	JYO		JJA	JYA			JJA	JÑE	JYA	JVA	JÑĀṀ	JVA		
JH																
Ñ	ÑJĀ								ÑCHA	ÑCHHU	ÑJA		ÑCHA			
Ṭ	ṬṬA								ṬPA				ṬṬA			
ṬH																
Ḍ													ḌJĀ	ḌYA		
ḌH																
Ṇ	ṆṬHAḤ	ṆḌAḤ	ṆYĀ		ṆYĀṀ				ṆṬHAḤ	ṆYAṀ			ṆṬHI	ṆḌĀ	ṆḌĀṀ	
T	TKA	TYAṀ	TPRA	TYA	TNA	TMA	TRĀ	TVĀ	TKA	TPA	TMA	TSA		TYĀ	TRA	TSA



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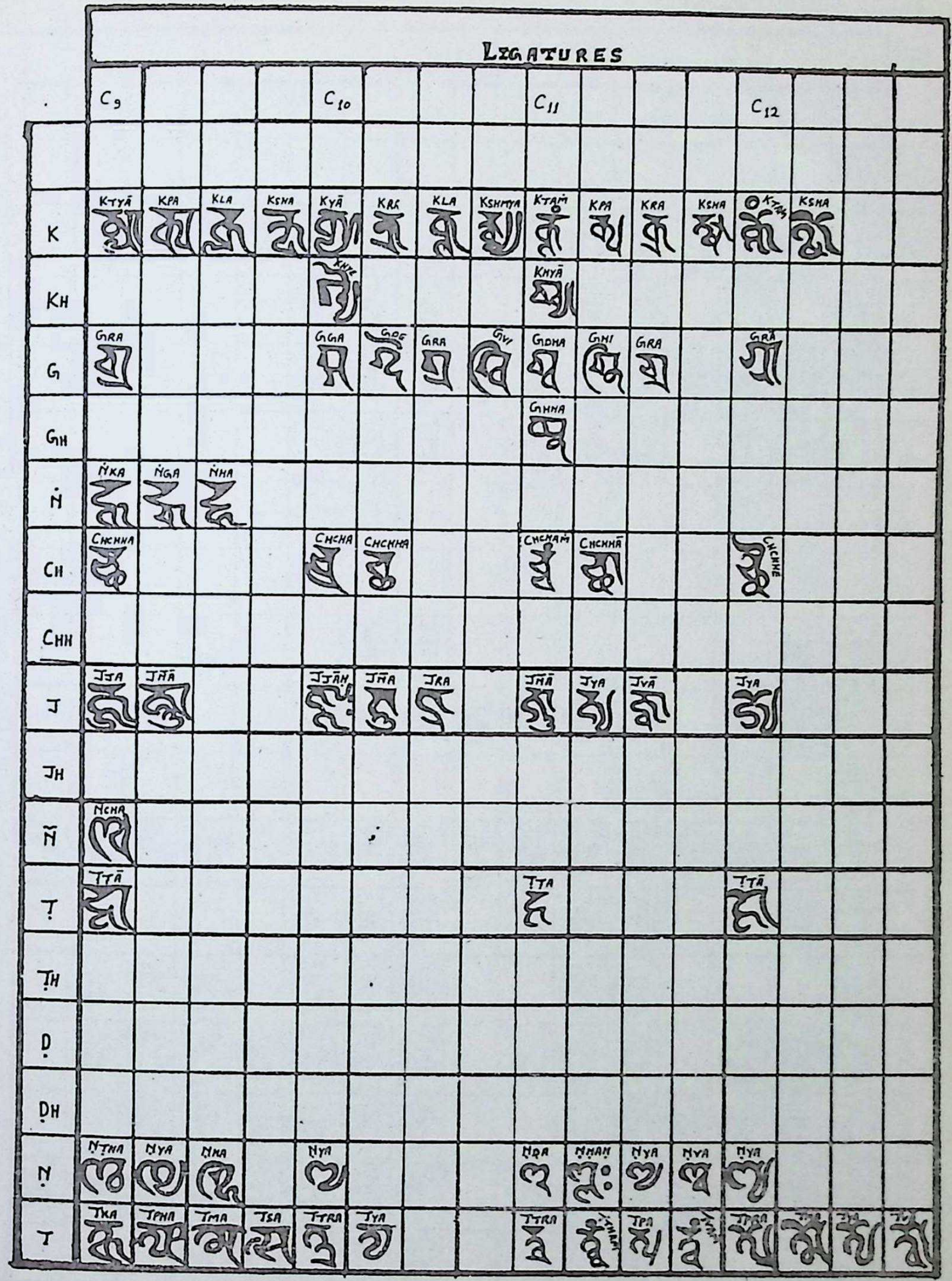
TH									THY							
D	DGA	DDHA	DBHA	DMA	DDHA	DRĀ	DVA		DBHA	DMA	DRA	DVA	DGA	DDHA	DBHA	DYA
DH					DHYA				DHYA	DHVA			DHYE	DHRU	DHVA	
N	NDA	NDHA	NMA	NYA	NTI	NNA	NYAṂ		NTA	NDA	NMA	NYA	NTA	NDRA	NNA	NVA
P	PPA	PYA	PRA		PTĀ	PRA			PTA	PYA			PTA	PYA	PRA	
PH																
B																
BH	BHYAḤ	BHRA			BHYAḤ	BHRĀ			BHYAḤ	BHRA			BHYA	BHRA		
M	MBHA	MRAḤ	MVA		MYAṂ				MNAḤ	MPAṂ	MYA	MVA	MYE	MRA		
Y	YYA															
R	[illegible]	RTHA	RSYA	RVVA	RKA	[illegible]	RMMA	RVVĀ	[illegible]	RGHA	RPA	RSHA	RGHA	RBHA	RVVA	[illegible]
L	LLA	LHA			LPI	LYĀ			LKA	LPA	LYA	LLA	LPA	LYAḤ	LLA	
V	VYĀ	VRA			VRĀ				VDHA	VYA	VRA		VYA	VRA		
Ś	ŚCHĀ	ŚYA	ŚVA		ŚCHA	ŚRĀ			ŚCHA	ŚYA	[illegible]	ŚVA	ŚCHA	ŚCHHA	ŚYA	ŚVA
SH	SHṬA	SHṬHA	SHPA	SHṬA	SHṬI	SHṬHĀ			SHṬA	SHṬHAḤ	SHVA		SHṬA	SHṬHA	SHYA	SHVA
S	STA	STHA	SMA	SYA	STHĀ	SMĀ	SYA	SVA	STA	SPA	SYA	SVA	STA	STHA	SMA	SYA
H	HMĀ				HMĀ	HMA			HMOU	HMA	HRĀ		HMA	HMĀ	HYAṂ	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K
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KPA
KLA
KSHA
KYĀ
KRE
KLA
KSHMYA
KTAṀ
KPA
KRA
KSHA
O KTAṀ
KSHA
KH
KHYE
KHYĀ
G
GRA
GGA
GDE
GRA
GVI
GDHA
GHI
GRA
GRĀ
GH
GHHA
Ṅ
ṄKA
ṄGA
ṄHA
CH
CHCHHA
CHCHA
CHCHHA
CHCHAṀ
CHCHHĀ
CHCHHE
CHH
J
JJA
JÑĀ
JJĀḤ
JÑA
JRA
JÑĀ
JYA
JVĀ
JYA
JH
Ñ
ÑCHA
Ṭ
ṬṬĀ
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ṆYA
ṆḌA
ṆMAḤ
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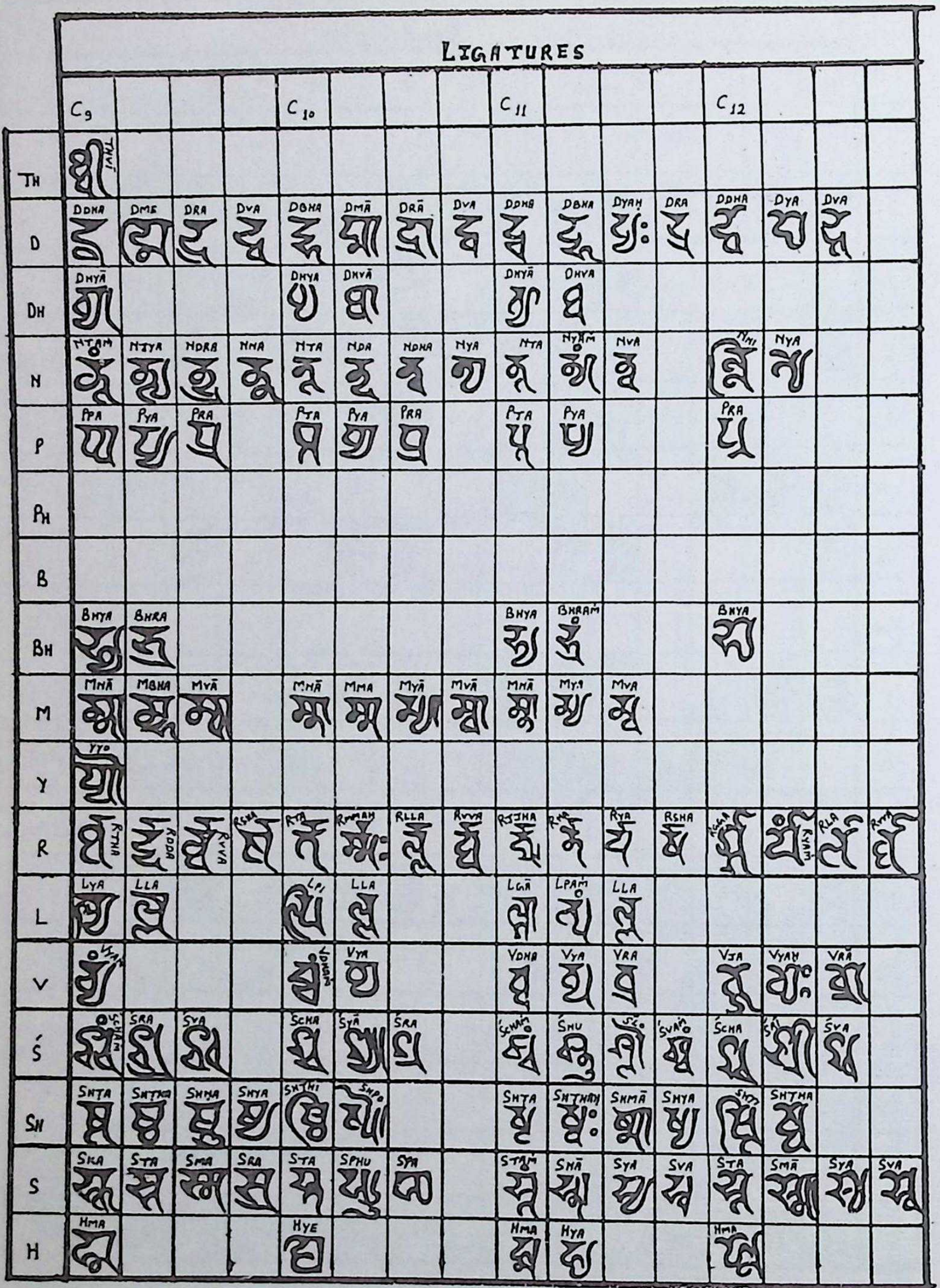
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DDHA
DBHA
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DRA
DDHA
DYA
DVA
DH
DHYĀ
DHYA
DHVĀ
DHYĀ
DHVA
N
NTAM
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NDA
NDHA
NYA
NTA
NYAM
NVA
NNI
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PPA
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BHYA
BHRA
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BHRAM
BHYA
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YYO
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RDDA
RVVA
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RTA
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STA
SMA
SRA
STA
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SMĀ
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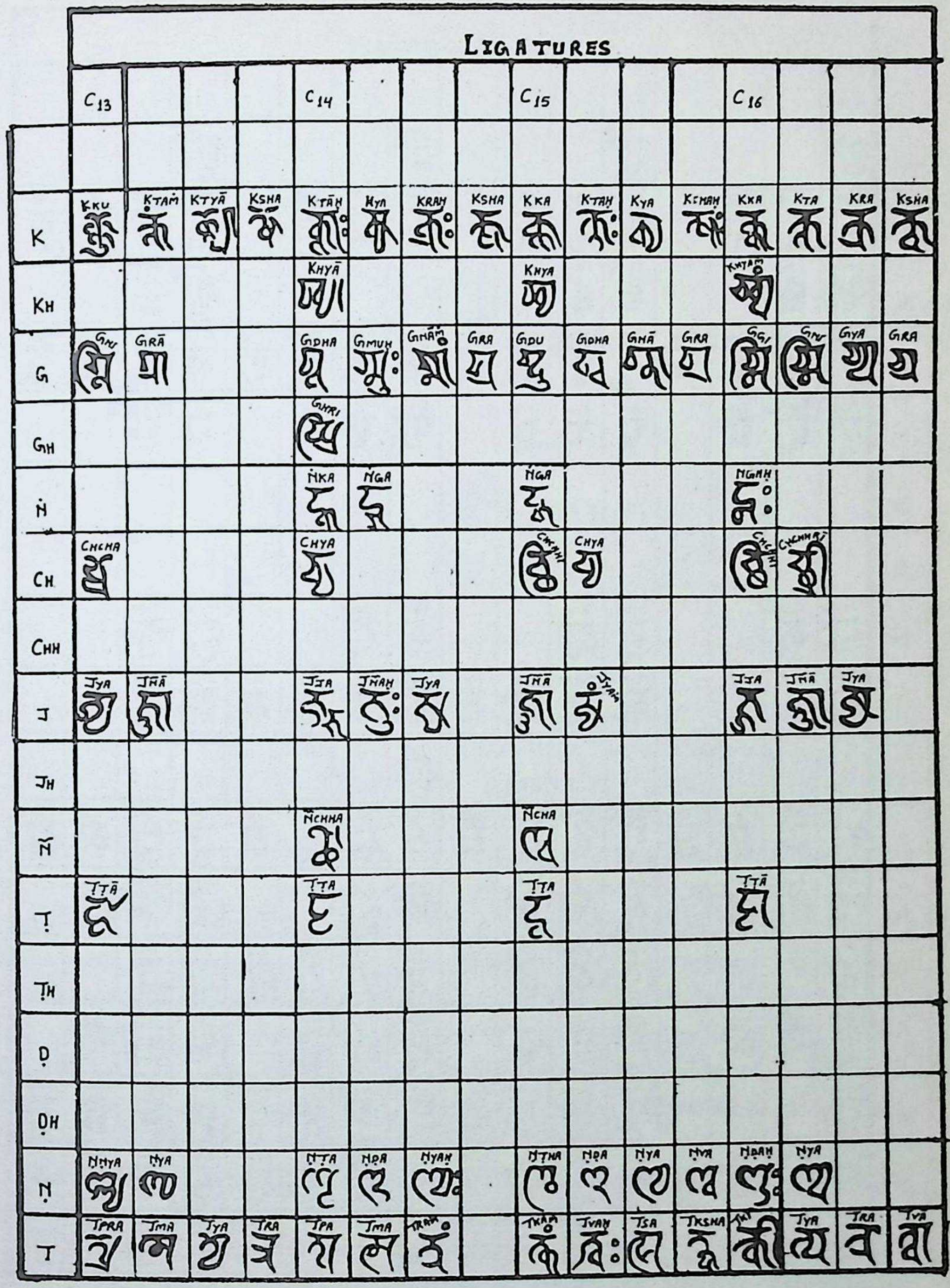
HMA
HYA
HMA


LIGATURES
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K
KKU
KTAṀ
KTYĀ
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KRAṀ
KSHA
KKA
KTAṀ
KYA
KSMAṀ
KKA
KTA
KRA
KSHA
KH
KHYĀ
KHYA
KHYAṀ
G
GNI
GRĀ
GDHA
GMUṀ
GNĀṀ
GRA
GDU
GDHA
GNĀ
GRA
GGI
GNI
GYA
GRA
GH
GHRI
Ṅ
ṄKA
ṄGA
ṄGA
ṄGAṀ
CH
CHCHA
CHYA
CHCHHI
CHYA
CHCHHI
CHCHHRI
CHH
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JYA
JÑĀ
JYAṀ
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JÑĀ
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ṬṬĀ
ṬH
Ḍ
ḌH
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ṆṆYA
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ṆVA
ṆḌAṀ
ṆYA
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TPRA
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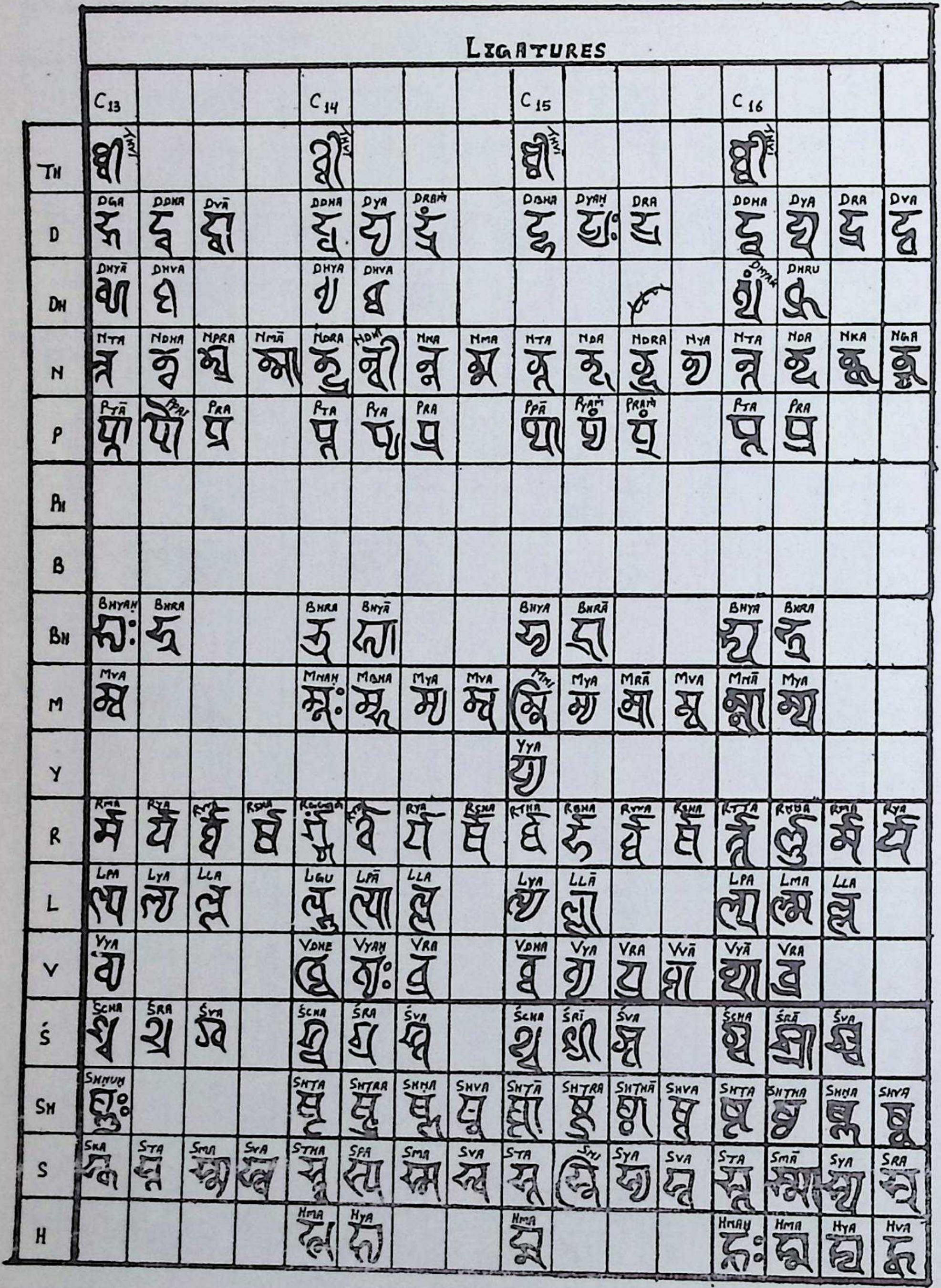
TRA
TVĀ


LIGATURES
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DYA
DRAṁ
DBHA
DYAḤ
DRA
DDHA
DYA
DRA
DVA
DH
DHYĀ
DHVA
DHYA
DHVA
DHYAṁ
DHRU
N
NTA
NDHA
NPRA
NMĀ
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HVA

4

The Age of Maturity (11th-13th Century A.D.)

Nāgarī, with fully developed top-stroke, straight vertical line, *halanta* sign, uniform medial signs and mutilated initial consonant in ligatures, is shown by Bharat Kala Bhavan Plate of Pratīhāra Harirāja (A.D. 983) and Kauṭhem Plates of Chālukya Vikramāditya V (A.D. 1008). The requirements of speed and simplification had a determining role in the evolution of the Nāgarī script, as illustrated in Fig. 7. It was in use since the 11th century A.D. in the Gaṅgā Valley, Central India, Rajasthan, Gujarat, Western India and the Deccan. This is also evident from the records of the late Pratīhāras, the Gāhaḍavālas of Kānyakubja, the Chandellas of Jejākabhukti, the Kalachurīs of Śarayūpāra, Tripurī and Ratanpur, the Kachchhapaghātas of Gopagiri, Dubakuṇḍa and Naravar, the Guhilas of Mevāḍa, the Chāhamānas of Sākambharī, Nāḍol, etc. and the Paramāras of Mālava, the Chālukyas of Kalyāṇa, the Śilāhāras of Koṅkaṇa and Kolhāpura, the Yādavas of Seuṇadeśa and Devagiri, the Kadambas of Goa and other royal or personal epigraphs. However, this does not mean that the Nāgarī of 11th century is identical with the Nāgarī of 20th century and thereafter, no development took place in the form of the letters. Certainly, it was the mechanization in printing technology which gave Nāgarī a modern stand-

EVOLUTION BY SIMPLIFICATION

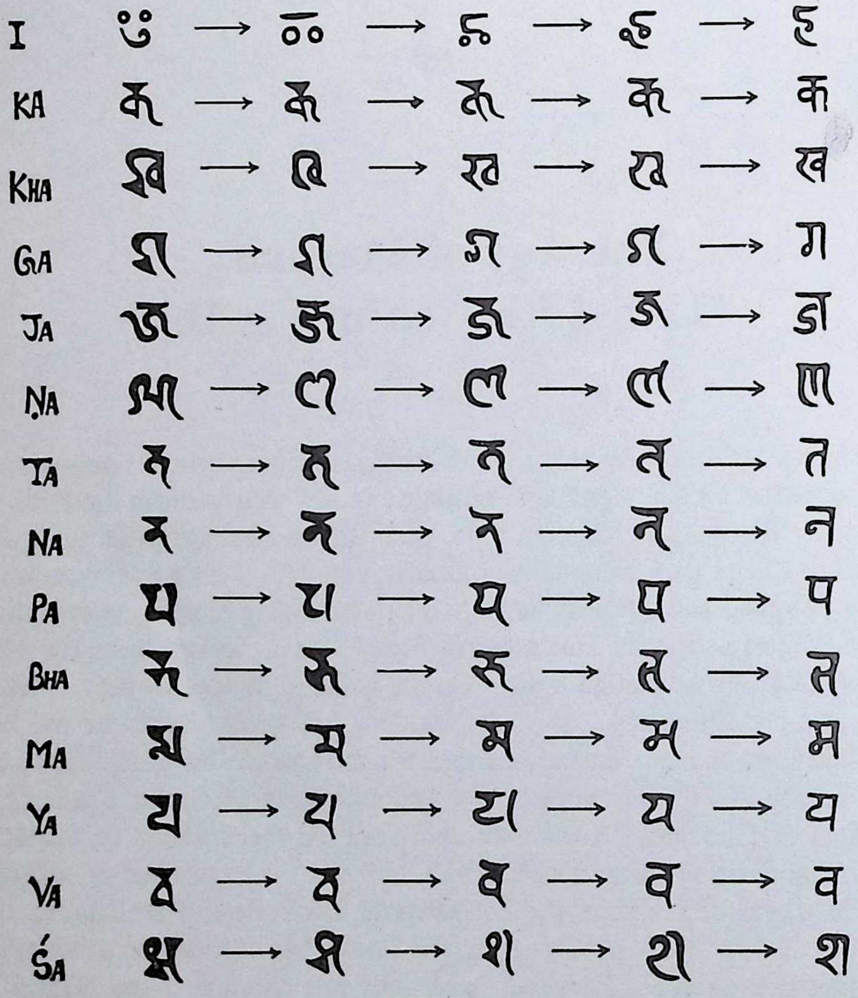
I
KA
KHA
GA
JA
ṆA
TA
NA
PA
BHA
MA
YA
VA
ŚA

FIG. 7

ardized shape. I am, of course, not dealing with all these processes in this chapter, however, it focuses mainly on the evolution till the 13th century A.D. because by then it reached a mature stage and subsequently became stereotyped.

There are minor varieties in Nāgarī script, depending on differences in localities, period or individual hands. These varieties have been shown by dividing them into Northern and Southern,[1] Jaina and non-Jaina,[2] or Eastern and Western[3] by the scholars. But these divisions are rather broad and largely vague, having limitations and do not take into account the minutiae of the alphabet. In order to understand clearly the development of the Nāgarī script I have worked out the following sub-divisions:

A. Eastern India

I. Bihar-Bengal, II. Assam, III. Orissa

B. Northern India

I. The Middle Gaṅgā Valley, II. Central India, III. Rajasthan.

C. Western India & the Deccan

I. Gujarat, II. Maharashtra, III. Karnataka.

Under these I am mainly concerned with (i) the fully developed or archaic form of letters, (ii) the changes due to developing technology, (iii) regional and inter-regional influences on the Nāgarī script.

Eastern India

The influence of the proto-Nāgarī, or Nāgarī alphabet in Eastern India gradually declined from the time of Mahīpāla I (c. A.D. 988-1038).[4] The use of the Gauḍī alphabet begins towards the close of the 10th century A.D.[5] which diverges from the proto-Nāgarī type and ultimately develops into regional scripts of Assam, Bengal and Orissa. To briefly review the changes in Nāgarī characters in Eastern India we now take up these regions.

Bihar-Bengal

11th Century A.D.

Table D_1 is taken from Bihar grant of Saurāditya (A.D. 1020). This inscription bears enough traces of proto-Nāgarī or Nāgarī characters along with the local forms of several letters. As for continuation of Nāgarī, the following letters preserved their old or advanced forms: initial vowel *e*, consonants *ka*, *ga*, *gha*, *cha*, *ṭa*, *ḍa*, *ḍha*, *ta*, *da*, *dha*, *pa*, *ma*, *ya*, *la*, *va* and *ha*; besides medial signs and ligatures. Of these, the advancement towards Nāgarī is marked in the line head-mark of *ṭa*, leftward bend of *ḍa* instead of the tail, straight right vertical of ta and horizontally placed bar of *sha*.

On the other hand, the letters *a*, *u*, *kha*, *ja*, *ña*, *ṇa*, *tha*, *na*, *pha*, *bha*, *ra*, *śa*, *sa*; medials *u* and *e* are marked by certain new or local innovations. Of these, the lower curve of *a* and *u* are distinctly prolonged. These peculiarities pave the way for Bengālī forms. The open-mouthed *kha*, *bha*, *sa*; cursive *ṇa*, double curved *śa* which have been marked in the preceding inscriptions of the region now become common. The new development in *ja* is noticed in the peculiar formation of the lower curvature. The new shape of *ña* contains Bengālī features with double loops to the right of a hooked vertical. The upper outer loop of *tha* is detached along with a peculiar inner looped form. Looped portion of *na* further slants downwards. Like Bengālī, the upper right limb of *pha* bears an outer loop. The new innovation in *ra* is a hollow triangular foot-mark. As for medial *u*, the new local hollow triangular like shape appears with Nāgarī form. For *e* both forms, top-stroke and left perpendicular, are retained in this inscription.

The noticeable peculiarity among ligatures is the representation of a dot or circle in *ṅ* to the right top. Both subscript *chha* and *tha* contain oval shape and present confusion. The old full shaped superscribed *ñ* appears side by side with the new Bengālī form.

12th Century

Table E_1 is taken from the Bodh-Gayā inscription of Gāhaḍavāl Jayachandra (A.D. 119X). The alphabet furnishes the incorporation of northern Nāgarī. This transformation is surely due to its belonging to a North Indian king. At the same time, the absence of tail, and notched-wedge shaped head-mark make the alphabet peculiar by which it can be distinguished from the other northern inscriptions of the same dynasty. The top-wedge is so prominent that it merges with superscript *r*. In such type of formation, certainly, the broader edged pens play an important role, from which inscriptions of the region were written.

Besides tail and wedge, the local influence is marked in the letters *u*, *ṭa*, *sa*; and medials *e*, *u*. The peculiar curvature of *u*, as it appears in the preceding period, becomes the common feature of the region. The right top of *ṭa* bears a small tick. As for *sa*, it furnishes tailed Nāgarī form along with a new form. In the new variety, left loop distinctly become triangular. The distinguishing features of medial *u* shows a local wedged vertical shape as in the preceding inscriptions. In the case of initial *e*, with both earlier perpendicular and top-stroke forms, a new sign is met with which is denoted by a falling tick to the left of the letter. The letter *kha* and *ha* are also of distinctive varieties. The left limb of *kha* shows a triangle like foot-mark, as in other eastern inscriptions, in the place of northern tailed shape. In *ha* tail has disappeared.

Rest of the letters assume developed modern Nāgarī counterparts. Of these, peculiarities may be noticed in the forms of *ja*, *ṇa*, *dha* and *bha*. The right limb of *ja* takes vertical shape. Middle bar of *ṇa* bends to left. An advanced form of *dha* occurs in this inscription. The new innovation is the addition of an oblique stroke in the upper portion. The letter *bha* is of transitional variety with right straight vertical.

13th Century

Table F_1 is derived from Gayā inscriptions of Sultan Muizzuddin (A.D. 1200) and Balban (A.D. 1268). These epigraphs reveal advanced forms of northern Nāgarī alphabet which indicates that, with the expansion of the Muslim rule, northern Nāgarī spread to the eastern region, the most remarkable development of which is the occurrence of modern looking forms of the letters *ja* and *bha*, while other inscriptions of earlier or current period show only their progressive features. As for other letters, they are found to be fully developed to approach their modern counterparts. Ligatures are in Nāgarī style excepting for the use of two armed superscribed *ḍ* and peculiar tailless *s*. Medial *e* retains left slanting top-stroke, however, in some cases left vertical form are also employed. It can also be noticed in medial *o*. All other medial signs are in fully developed Nāgarī shapes.

One notable point about these inscriptions is their relationship with Muslim rulers. Definitely, it was the force of tradition and popularity of Nāgarī in that period which compelled Muslim rulers to use it side by side with their own script. This is further evident from the accommodation of Nāgarī alphabet on Muslim coins. As for example: Mohammed of Ghaznā (A.D. 1027), Mohammed Bin Sam (A.D. 1193-1206), Mohammed Bin Mohammed (A.D. 1206), Shamsu-d-din Iltutmish (A.D. 1210-35), Ruknu-d-din Firuz Shah (A.D. 1235), Raziyya (1236-40), Muizzu-d-din Baharam Shah (A.D. 1240-42), Alau-d-din Masud Shah (A.D. 1242-46), Nasiru-d-din Mohammed (A.D. 1246-66), Ghiyasu-d-din Balban (A.D. 1266-87), Muizzu-d-din Kaikubad (A.D. 1287-90), Jalalu-d-din Firuz (A.D. 1290-96), Alau-d-din Mohammed Shah (A.D. 1296-1316) and others employed Nāgarī for writing legends on their coins.[6]

Assam

The script of Assam was influenced by proto-Nāgarī in the preceding periods, which eventually diverges in this period and shows the same process of development as does Bengālī. However, the script of Assam has retained some distinctive characteristics.

11th Century

The peculiarities of the Assamese alphabet are shown in Table D_2; they are taken from Gauhāṭī and Guākuchi Grants of Indrapāla (A.D. 980-1010). The tail of the letters is sharply bent to the right and head-mark are in solid triangular or line form. In the vowels only *a, i, u* and *e* are to be found. The left curve of a is prolonged in eastern style and right vertical shows a foot-mark. *I* shows a double-curved shape above two circles. The left curve of *u* further extends to the top-mark; and *e* opens to the left as in eastern style.

Among consonants, most of the letters are represented in their old or developed Nāgarī characters in the formation of which effects of the local hand are clearly marked. Only some distinction occurs from the usual northern Nāgarī in the letters *kha, cha, ḍa, ṇa, tha, bha, ra, śa* and *sa. Kha* shows a peculiar variety. The breadth of *cha* is broader. A new innovation in *ḍa* is seen in the replacing of left curve by slanting stroke. The cursive *ṇa*, upper left-curve detached *tha,* open-mouthed *bha* and *sa*, double curved *śa*, which occur in the preceding period, become more frequent now. *Ra* furnishes a peculiar tail or hollow triangular loop in the lower portion. In later period hollow triangular with a slanted dividing line in the middle becomes the standard form of the letter *ra*. It is certainly the shape of *ra* and *va* on which basis Bengālī and Assamese can be discriminated.[7]

Among ligatures, superscribed *ṅ* shows the use of a dot as in Nāgarī. The local influence is marked in the leftward double curved form of superscribed *ñ*, double curved with a tick form of *ṭ*, cursive *ṇ* and hooked form of *th*. The curly Nāgarī form of superscript *r* is noticeable. Medials *u, e, ai, o* and *au* represent more than one form in which local features gain more currency. In the local variety, medial *u* is formed by triangular, or rightward hooked shape. In the formation of medials, *e, ai, o* and *au* a tendency of extending the head-mark to left and curving it in a sort of hook is noteworthy.

12th Century

The further deterioration of Nāgarī features and evolution of local script is evident from the illustration shown in Table E_2 which has been taken from the Khonāmukh Plates of Dharmapāla. The influence of Nāgarī characters retained in some letters in forming which too local style is more apparent. Notable new innovation in initial *a* is seen in the formation of a knob in the left curve. Leftward opened *e* peculiarly curves its left extension. In the formation of medial signs, the local forms, which previously occurs, frequently employed in this period and developing in the same direction. On the whole, the alphabet of this inscription reveals a transmutation of Nāgarī into proto-Assamese or Assamese.

Orissa

The general observation on Eastern Indian alphabets apparently shows more divergence in the Orissa region's script from Northern Nāgarī than the script of Bengal or Assam. The distinctive writing objects and the writing techniques of the region are mainly responsible in the peculiar transformation which makes the letter more cursive. In course of time, curvature of the letters became prominent and ultimately prepared the way for the development of the Oriyā script. Kunjabihari Tripathi believes: "Though the Oriyā alphabet is mainly affiliated to proto-Bengālī, the influence of the Nāgarī is also noticed in early Oriyā inscriptions."[8]

11th Century

Mahulpara plates of Somavaṁśī king Mahāśivagupta–Dharmarath and Naḍagām plates of Gaṅga Vajrahasta are selected and illustrated in Tables D_3 and D_4 for study. Palaeographically, both inscriptions differ in some respects, but at the same time they represent assertive local influence on the writing. The new development in initial vowels occur in the shapes of *a*, *ā*, *i* and *e*. *A* of Table D_3 shows the same process of development as in Bengal inscriptions. Table D_4 shows somewhat different mode in which left curve opens downwards with horizontally extended extremities. The shape of long *ā* is also peculiar. It presents a feature from which modern Oriyā form emerges later on. *I* is shaped as a line mark above the two circles in Table D_3. Table D_4 shows a curved shape in place of line mark. *E* is of open-mouthed variety in which both left arms become horizontally parallel.

However, consonants *ka, ja, ḍa, ta, da, dha, ma* and *ha* preserve

Nāgarī counterparts. All of these retain old shape. There is nothing noteworthy from the viewpoint of development. Only one point worthy of attention is the straight formation of right vertical in *ja*. Other letters mark the evolution towards local scripts. In Table D_3, the reminiscent hollow triangular shape appears in the left limb of the letters *kha, ga* and *śa*. The hollow-triangle shape is opened in Table D_4. The breadth of *cha* is broader in Table D_3. *Ṭa* retains archaic double curved shape with right tick. *Ṇa* extends its right vertical upwards. The letter *tha* is marked by new innovation in which the upper loop is transformed into a hook and base becomes sloppy. The left arm of the letters *pa, pha, ya* and *sha* is bent in the middle. *Pha* attains Oriyā counterpart. Lower extremity of *bha* extends towards the left instead of the right. The base of *va* is slanted to meet with the right vertical at the end.

Among ligatures, superscript *ṅ* contains a small circle to the right. Superscribed *ñ* is of local type. In medial vowels local forms gain more currency. Of them, a new innovation is marked in u and *ū*. In the new form of *u* a rightward hook is drawn to the bottom of the letter; *ū* is formed by extending the lower limb and looks like medial *ṛi*.

12th Century

The further termination of Nāgarī influence is marked by Bhuvaneśvara inscription of Svapneśvara, shown in Table E_3. The alphabet of this inscription reveals a developmental process of the local script. In this, the most remarkable transformation is noticed in *a* initial. *Ṭha* retains old circular shape. This shape still continues in Oriyā.

General Remarks

The above observations attest that the Nāgarī features were losing hold in Eastern India during 11th-12th centuries; and the local scripts, namely Bengālī, Assamesa, Oriyā, etc., were emerging from it.

Northern India

This vast region was divided into several local states during the period, which maintain distinguished calligraphic peculiarities. In order to understand clearly the development with distinctive characteristics northern Nāgarī may be assorted into three groups: I. The Middle Gaṅgā Valley, II. Central India and III. Rajasthan. But it is difficult to fix the exact limit of one type of writing because there are overlappings due to socio-political reasons.

The Middle Gaṅgā Valley

11th Century

Table D_5 is taken from Goharwa plates of Kalachurī Karṇa (A.D. 1041-73) and Table D_6 from Chandrāvati plates of Gāhaḍavāla Chandradeva (A.D. 1093 and 1099). Among initial vowels, the peculiarities of the region which reflect from these inscriptions are noticed in *a* and *i*. In *a*, the lower limb of the left curve prolongs upward and the upper joining bar disappears, or shortens. Table D_5 shows a new innovation in *i* of which curve and circles are substituted by a line. It may be identified as the first progenitor of its modern counterpart. In this period, such type of development only occurs in this region. Other initial vowels, *ā* and *u* resemble modern Nāgarī in forms and *e* curves its left limb.

Among consonants, the distinctive letters are *cha, bha* and *śa*. The upper left limb of *cha* detaches from the right vertical and prolongs upwards. *Bha* shows only transitional phase with right vertical. The outer looped or hooked *śa* develops to attain the modern counterpart, while in other regions old forms of these letters are more common.

In other letters, right limb of *ka* extends to right, *kha* and *ga* resemble modern counterparts. The left curve of *gha* moves up. A fully developed form of it can be seen in *ghā* of Goharwa plates. *Chha* presents developing process by placing loops one upon the other. *Dha* is yet to develop upper oblique shape. The right appendage of *pha* starts from middle portion in modern style, only differing by right hooked shape instead of modern curvature. *Sha* slants its middle bar. However, rest of the letters approach fully developed shapes.

Among ligatures, superscript *gh* is of developed variety, subscript *chha* retains oval shape and *tha* is of peculiar double-looped variety. Table D_6 reveals an unusual peculiar shape of *śra* and superscribed *s* retains open-mouthed feature.

In medial signs, only the cursive variety is employed for *u*, right limb of long *ū* prolongs in modern style. *Ṛi* in *hṛi* is attached to the outer curve while in eastern region joins with the tail.

12th Century

The further developments are shown in Tables E_4 and E_5; taken from Kamauli plate of GahadavalaGovindachandra (A.D. 1126) and Mahobā plates of Chandella Paramardideva (A.D. 1173). These inscriptions reveal developed Nāgarī characters in which only the development is required in the letters, *i, cha, chha, ja, dha* and bha. Of these, the initial *i* shows the transitional form of the letter. *Cha* occurring in the Kamauli plate is of old beaked variety. Table E_5 represents a new innovation by flattening the upper left curve. Only the protrusive bar is needed to develop into the modern form: Chha is in archaic oval, or double-looped variety. The right limb of *ja* becomes almost a straight vertical but upper stroke is yet to coalesce with the lower one to make a single line. *Dha* shows primitive stage of development by adding an oblique stroke at the upper angle. The left limb of *bha* still shows an extension towards down instead of modern upward prolongation.

In ligatures, the modern form of superscript *ñ* is met with in Table E_5 and th also is of modern type. The medial signs are in Nāgarī form except *e* which optionally retains the left vertical form.

13th Century

Table F_2 is taken from Ajayagaḍh inscription of Nāna (A.D. 1288). Nāna was the minister of the Chandella Bhojavarmā. In consequence, the inscription follows Chandella style of ornamental and bold writing. A further development is marked in initial *i* which has taken almost modern shape. *Cha* and *ja* are still to develop. *Dha* presents the developing process by bending the oblique into a curve. The right appendage of *pha* still is in old looped form with a slanted stroke, while in other inscriptions attains modern curly features. The left limb of bha is falling down. *Śa* represents a distinctive feature, denoted by a looped hook with slanting bar to the left of the vertical line. In ligatures, *ṅ* is of old two armed variety without dot. Medial *e* still retains perpendicular shape. In the top-stroke form of it the ornamentation can be seen.

Central India

11th Century

The Rājapura plates of Nāgavaṁśī Madhurāntakadeva (A.D. 1065) and Sās-Bahū Temple inscription of Kachchhapaghāta Mahīpāla (A.D. 1093) have been selected to study the development of Nāgarī script in Central India. These are respectively illustrated in Tables D_7 and D_8. The initial *a* of these inscriptions differs from that found in the Middle Gaṅgā Valley in which the left curve joins the head-mark. It differs from Western Indian *a* in having an additional lower slant in the vertical. Initial *i* shows developing process. A rare long *ī* occurs in Sās-Bahū inscription which is formed by a head-mark, a vertically curved line coming down from it and a horizontal curve with one circle on either side below. The left limb of *e* is denoted by a curve as in the Middle Gangetic region. The triangular variety of foot-mark is retained in the Rājapura inscription but it is developed in tailed form in the later Sās-Bahū inscription. The left notched portion of *gha* is still horizontally placed. *Cha* retains beaked shape and *Chha* is of oval variety. *Dha* is yet to develop the oblique stroke of upper angle. Table D_7 shows archaic open-mouthed *bha;* but it occurs in transitional phase in Table D_8. *Śa* presents old inner looped form, while in the Middle Gaṅgā Valley it has taken the form of its modern counterpart. The noticeable point in ligature is the disappearance of the dot in the superscript *ṅ*. While in the eastern region it always contains a dot in the right portion. The medial signs are usual as in the Middle Gaṅgā Valley.

12th Century

The further development in Central Indian Nāgarī script is marked by a number of inscriptions. We have selected Sarakho plates of Kalachurī Ratnadeva II (A.D. 1128), Māllār inscription of Kalachurī Jājalladeva II (A.D. 1167), Sihāvā inscription of Kākaira Karṇarāja (A.D. 1192), Bhopāl plates of Udayavarmā (A.D. 1199) and sequentially illustrated them in Tables E_6, E_7, E_8, & E_9.

Among initial vowels, *a* is found in different varieties. Table E_6 shows a shape which is similar to that found in Goharva Plates (D_5) of previous century. In Table E_7 it occurs in fully developed northern variety. Table E_9 furnishes a peculiar type of it which is shaped as a double curve to the left of the vertical line, without a joining stroke. It becomes further more peculiar in *ā*, where upper curve prolongs to the vertical. Perhaps this formation is due to cursive or rapid hand writing. Initial *i* of Kalachurī inscriptions represents a transitional phase of the letter as we find in the Middle Gaṅgā Valley, while in Bhopāl inscription it is of the old variety. Rare long *ī* occurs in Table E_6, formed by adding an additional slanting stroke on the top of *i* (cf., Pls. 127 & 125). An archaic triangular form of *e* is met in Sarakho Plates (Table E_6). Other initials, *u, ū* and *ai* resemble their corresponding letters in modern Nāgarī.

Among consonants, most of the letters have taken the shape of modern Nāgarī counterparts. The development is lacking only in letters *cha, ja, pha, ba* and *bha*. In upper horizontal arm of *cha* a leftward protrusive stroke is yet to develop. Both right limbs of *ja* are still formed separately. The right appendage of *pha* is of hook shape. *Bha* retains its lower extensiion in left arm. A peculiar form for *ba* occurs in Table E_6 which has a tail at the left of the square and prolongation of the right vertical.

As for development, the most remarkable letters are *chha*, *ṇa* and *dha*. *Chha* in E_9 presents modern features by placing the loops one upon the other in which only the separation in upper tailed portion is needed. In Table E_8 *ṇa* shows a new innovation by curving its left arm as in the modern style. The analogous Nāgarī type of *dha* occurs in Table E_8 and E_9.

In ligatures, superscript *ph* of Table E_7 shows modern features while subscript *tha* is of old double-looped variety. Medials are in modern Nāgarī shapes. The only exception is noticed in the vertical form of *e*.

13th Century

Table F_3 is taken from Kūreṭhā Plate of Pratīhāra Malayavarmā (A.D. 1220). This inscription denotes further development in Nāgarī script of which almost all letters attain their modern counterparts. Development is needed only in initial *i, ja, dha* and *bha*. *I* shows of peculiar variety (Pl. 153, F_3). The right limb of ja is yet to become a single vertical. *Dha* loses its upper top-mark and left arm of *bha* is still falling downwards. The remarkable development which draws attention is the modern shape of *cha*. As for the medial vowels, only the top-stroke form of *e* occurs in this inscription. In it a new innovation is marked in forming a circle at the upper extremity. But perpendicular form is maintained in *ai* and *au*.

Rajasthan

11th Century

For the study of 11th century alphabets in Rajasthan area the Banswārā Plates of Paramāra Bhojadeva (A.D. 1019) and Kadmāl Plates of Guhil Vijayasimha (A.D. 1083) are selected and illustrated in Tables D_9 and D_{10} . Kadmāl Plates which belong to later period display more advanced forms of the alphabet than Banswārā Plates. Among initial vowels two letters, i.e. *i* and *e*, draw attention. Of these *i* is of archaic form with two circles and one curve below. In *e* new innovation is marked in the formation of left limb in a single stroke. This is the real base of modern Nāgarī *e*. Other initial vowels *a*, *ā*, *u* and *ū* also occur in their fully developed form.

Among consonants, the left limb of *kha, ga* and *śa* show a triangular loop in Table D_9 whereas it develops into modern rounded form in *ga* and tailed shape in kha and *śa* in Table D_{10}. In Table D_{10} gha occurs in fully developed Nāgarī form and *ja* denotes a peculiar form which looks like initial *ū*. In *dha* of Kadmāl Plates a new innovation is marked in the formation of an oblique stroke at the upper angle, while other inscriptions of the period do not comprise such type of development. In Table D_9, *pha* retains loop with a stroke at right as appendage, *bha* is of open-mouthed variety and *śa* is of inner looped type. In Table D_{10} the right appendage of *pha* is in modern cursive form, *bha* is of transitional variety and *śa* is of modern type. The rest of the letters attain their fully developed form. Ligatures and medial vowels are usual as in other parts of Northern India.

12th Century

The further development in Nāgarī script is illustrated in Tables E_{10} and E_{11} which have been derived from Pāldī inscription of Guhila Arisimha (A.D. 1116) and Nāḍol inscription of Chāhamāna Kīrtipāla (A.D. 1161). Of these inscriptions Pāldī inscription is earlier. In the consequence, Nāḍol inscription furnishes more developed form than Pāldī inscription. The peculiarities in initial vowels are marked in *i*, *ī*, *u*, *e* and *ai*. Of these *i* retains older form till now in this region, while in other regions it presents transitional phase. *Ī* is formed by a hook, a circle and a horizontal top-line. In *ū* an additional hook is added in the lower extremity of *u* instead of modern cursive middle attachment. Pāldī inscription presents an old triangular form for *e*, whereas it occurs in modern form in Nāḍol inscription. *Ai* also shows modern feature.

Among consonants, most of the letters resemble their counterparts in modern Nāgarī. Only the forms of *cha, ja, dha, pha* and *bha* are yet to develop. Like other inscriptions of the period these letters denote their developing process. In ligatures, superscript *ṅ* is still without a dot and *ñ* resembles the letter in modern Nāgarī. Superscript *ś* is to be found in old as well as new type. Subscript *tha* is of archaic oval variety.

13th Century

Table F_4 is taken from Māndhātā Plates of Paramāra Jayasimha-Jayavarmā (A.D. 1274) and Table F_5 is derived from Kavāljī Temple inscription of Chāhamāna Hammīr (A.D. 1288). These inscriptions mark further progress in Nāgarī script. Development is required only in letters *cha* and *bha*. As for *cha* its upper left protrusive is yet to develop. In *bha,* the left portion is still falling downwards.

Among the initial vowels the lower curve of *a* prolongs upward. The reminiscent form of *i* occurs in the Chāhamān inscription. Rare initial *ṛi* occurs in Māndhātā Plates which is of transitional variety. *Au* retains its archaic shape. As for the consonants, medial and ligatures, they approach the form in modern Nāgarī.

Western India and the Deccan

The scribes of western India and the Deccan had their own style of writing which diverges from the northern Nāgarī in its appearances as well as in the special forms employed for some letters. This is called Nandi-Nāgarī. A.C. Burnell[9] suggests that Nandi-Nāgarī is directly derived from the North Indian Nāgarī in about eleventh century A.D. In the same way recorders of Jaina-sect had their own individuality which is known by the name of Jaina-Nāgarī. The peculiarities of these two variant forms of Nāgarī may be understood best by the help of Fig. 8. Besides the usual form of Nāgarī was also in circulation.

Gujarat

11th Century

Table D_{11} is taken from Paliād and Bhadreśvar Plates of Chālukya Bhimadeva I to represent the Nāgarī alphabet of Gujarat region. There are some peculiarities which draw attention. Both curves of initial *a* are detached from the right vertical. *I* retains its old feature. *E* has a slanting stroke in the left and a bar in the right in modern style, like Kadmāl inscription of Guhila king (D_{10}).

In consonants, the notable letters are *ga, gha, cha, ja, ḍa, ṇa, dha, pha, bha, la* and *śa*. Of these, *ga* presents modern as well as triangular form in the left limb. Left notched portion of *gha* is still to take vertical position. *Cha* retains its beaked shape. In *ja* left portion is formed by a single stroke and right curve separately joins in the place of straight

SPECIMENS OF NĀGARĪ JAINA-NĀGARĪ AND NANDI-NĀGARĪ

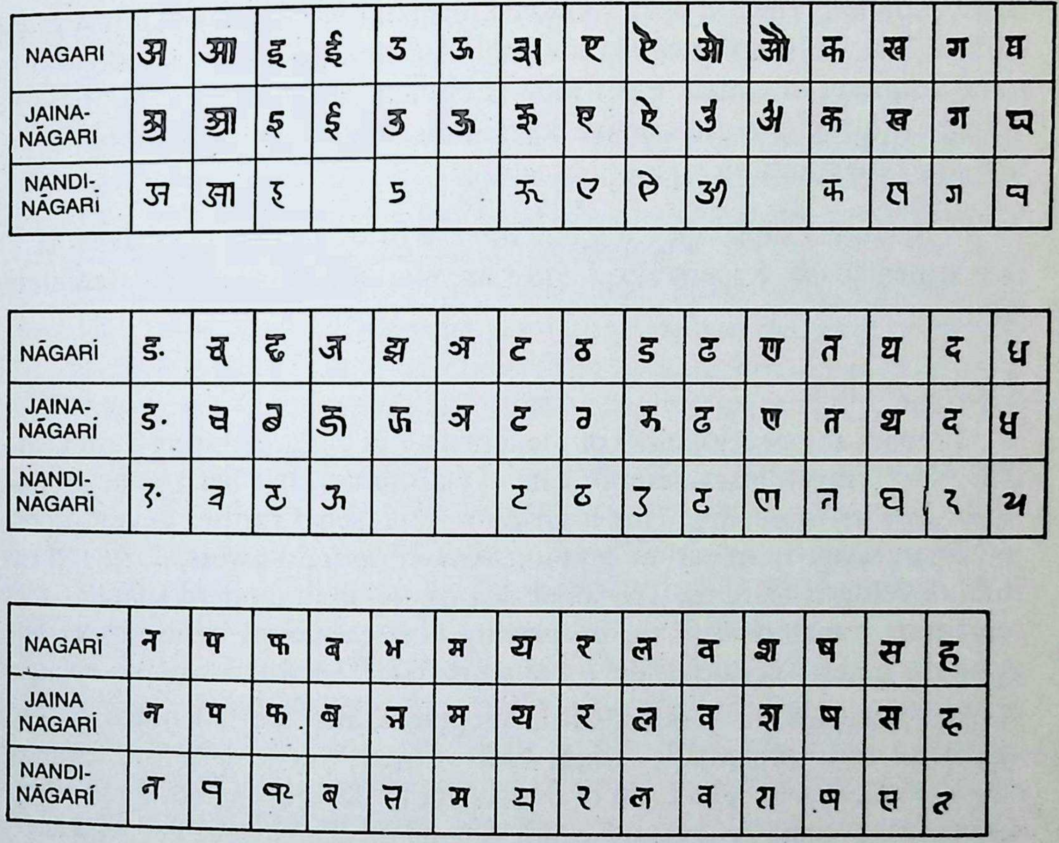
NAGARI
JAINA-NĀGARI
NANDI-NĀGARI
NĀGARĪ
JAINA-NĀGARĪ
NANDI-NĀGARĪ
NAGARĪ
JAINA NAGARĪ
NANDI-NĀGARÍ

FIG.8

formation of right vertical. *Ḍa* presents transitional phase while in other regions it has attained its modern shape. *Ṇa* shows cursive form of top as in the inscriptions of Eastern India. *Dha* is yet to develop its upper oblique. The right appendage of the letter *pha* shows curve with slanted stroke in northern style, while in Maharashtra and eastern region looped form is more common. The old open-mouthed form of *bha* remains in this region. In *la* left curve sharply bends inwards. As for *śa* double looped form is more common in which upper loop is circular and lower one triangular. Along with this the old cursive-topped and modern outer looped forms are also in use in this region.

In ligatures, subscript *chha* and *tha* are of oval type. *D* of *dvaṁ* is in two armed shape. Superscript *ś* and *s* are met in old as well as in modern forms.

12th Century

To mark the development of the alphabet in Gujarat during 12th Cent. A.D. the Verāval inscription of Chālukya Bhīma II has been selected and illustrated in Table E_{12}. This inscription represents further development in Nāgarī script from earlier century. Among initial vowels, *a, u, e* show fully developed features. The letter *cha* of *chā* is in modern shape. *Chha* represents transitional phase by placing both the loops of the letter one upon the other. The top of the letter *ṇa* is flat. *Dha* with its upper oblique stroke represents the process of development. But the left notch of *gha* is still placed horizontally. Right limb of *ja* is yet to take the form of single vertical line. The form of *bha* is yet to develop. Other consonants resemble the letters in modern Nāgarī. Among medial vowels, the peculiarity may be noticed only in the formation of the left perpendicular type of *e*.

13th Century

Table F_6 is taken form the Verāval inscription of Chālukya-Vaghel King Arjuna (A.D. 1264). This inscription records further development in the Nāgarī script. Initial *i* has taken fully developed shape. The letters *gha* and *dha* have almost taken their modern shapes. But *cha* in this region is still of beaked variety. *Chha* is of peculiar oval variety with slanted cross bar of tail. The right limb of *ja* is yet to take single vertical form. *Bha* denotes its transitional phase. In ligature *bdha,* the use of the old square form of b can be seen. Like earlier inscriptions of the region, this inscription also represents more frequent use of the vertical form of *e*.

Maharashtra

11th Century

I have selected Kauṭhem Plates of Chālukya Vikramāditya V (A.D. 1008), Kalas-Budrukh Plates of Yādava Bhillam III (A.D. 1026), Bhaṇḍup Plates of Śilāhāra Chhittarāja (A.D. 1026), Kharepāṭaṇ Plates of Śilāhāra Anantadeva I (A.D. 1094) and illustrated them in Table D_{12}, D_{13}, D_{14} and D_{15} respectively. These inscriptions show some peculiarities of the region. They also show some differences among themselves which may be due to these inscriptions belonging to different dynasties who had their own cultural gravity. Of that sequel distinction in the inscriptions are discernible.

Kauṭhem Plates of Chālukya king Vikramāditya V represent the developed form of Western or southern Nāgarī (D_{12}). Initial *a* is found in fully developed western or southern variety. The left portion of it is formed by two curves which are joined by a horizontal bar with the right vertical. *I* persists with its old shape. In the formation of *e*, the influence of northern regions is clearly marked in which the right limb is formed by a single stroke which is unlike the *e* found in Gujarat region. Rare *au* shows its old features. In consonants, left limb of the letters *kha, ga* and *śa* are marked with a triangular formation. Left notch of *gha* is placed horizontally. *Cha* retains beaked form. The forms of *chha* and *pha* are almost same. Both letters furnish a tailed inner loop in the right portion. The letters *na* and *ta* show modern features side by side with the old cursive shape. The upper horn of *dha* is yet to develop. *Na* retains old curved shape. The archaic form of *bha* denotes a tail in the left limb. *Śa* is also of old inner looped variety.

Table D_{13}, which has been taken from Kalas-Budrukh Plates of Yādava Bhillan III, shows the northern form of *a* without lower stroke, progressing feature of *i*, tailed *kha*, flat-topped *ṇa* and vertical form of *na*. Both forms of *bha*, archaic open-mouthed and transitional, occur in this inscription. But triangular type of left limb remains in *ga* and *śa*. Left curves of *gha* are horizontally placed. *Pha* like Kauṭhem Plates shows an inner loop in the right limb. And *śa* is also of old inner looped or flat-topped variety.

The lower extremity of the letters in Śilāhāra inscription is bent to the right. Initial *i* of both inscriptions present only old features of the letter. The left limb of *kha* bends to left in cursive or straight form in place of developed tail or archaic triangle shape. The left limb of *ga* also develops in the same direction. Rare *jha* occurs in both inscriptions. *Ṭha* of *ṭhā* in Table D_{15} presents the features of the letter as found in Jaina-Nāgarī. The top of *ṇa* is cursive. Table D_{14} which has been taken from an earlier inscription of this century furnishes only the curved form of *ta* and *na*, old type of cursive or flat-topped *śa* while later Kharepāṭaṇ plates (Table D_{15}) denote their well developed shape. *Dha* of this region is still without upper horn. The letter *pha* differs from the inscriptions of the same region by its outer curve of the right limb in place of inner loop. *Bha* presents only its transitional phase in which right arm is in curved shape instead of a vertical line.

Among ligature, superscribed *gh* in Table D_{15} denotes its modern shape. Subscript *chha* is of oval variety. Optionally letter *s* retains old open-mouthed shape. The medial vowels are usual as in that period.

12th Century

Kolhāpur Plates of Śilāhāra Gaṇḍarāditya (A.D. 1126) and Kolhāpur inscription of Śilāhāra Bhoja II (1190-93) are selected and illustrated in Table E_{13} & E_{14} to represent the development in Nāgarī script in 12th century A.D. The new innovations which draw our attention are found in letters *kha, gha, cha, ṇa, dha, ba, bha, śa*. The left limb of *kha* develops into tailed shape as in northern inscriptions. The notched portion of *gha* prolapse to left and are placed vertically. *Cha* flattens its upper limb in which only the protrusive stroke is wanted. The top of *ṇa* becomes flat as in northern inscriptions. *Dha* develops an oblique stroke in the upper portion. A distinct sign for *ba* occurs in Table E_{14} which is shaped with double loops to the left of a vertical line. The right limb of *bha* becomes vertical. *Śa* with outer loop denotes the modern phase of the letter.

On the whole, these inscriptions furnish developed form of the letters in which the development is required only in the letters *cha, ja, dha, ba* and *bha*. Of these, left curve of *ja* is shorter than other inscriptions.

13th Century

Table F_7 is taken from Kālegāon plates of Yādava Mahādeva (A.D. 1260). This inscription apprises of further development in Nāgarī script. As for initial vowels *a*, *ā* and *e* are of fully developed variety. Initial *ṛi* also completes the way of developed in which only the lower hook still remains to develop. Initial vowels *i, u* and consonant *chha* denote peculiarities which resemble the corresponding letters in Jaina-Nāgarī. The breadth of *ja* is broader as in Jaina-Nāgari. The most remarkable development which occurs in this inscription is the use of advanced and modern form of *ba*, while in other regions the letter is generally represented by the sign of *va*. Left vertical slant of *bha* prolongs upward, which shows that it is still in the process of developing into the modern shape. The development requires only in *cha, ja* and *bha*.

In ligatures, modern form of *ñ* occurs in this inscription. Superscript *ṇ* is formed by a single stroke as in modern western style. Medial vowels display modern shapes along with the usual both forms of *e, ai, o* and *au* of the period. In such type of formation top-stroke form of *e* is more common.

Karnataka

11th Century

Table D_{16} is taken from Ittagi Plates of Kadamba Jayakeśi I (A.D. 1062) to represent the Nāgarī script of the region. In place of western double curved form of initial *a*, here we find the use of northern shape with prolonged outer curves from the left vertical. With two arms above the two circles the initial *i* appears in developing process. Here we find developed forms of *kha*, *ṇa*, *bha* and *śa* in the place of old features of Maharashtra region. Side by side with the developing horned form *dha* old shape also persists. The right appendage of *pha* joins the top instead of being joined in the middle of the vertical as in modern Nāgarī. The archaic form of open-mouthed *sa* also survives along with the developed shape. In the ligatures archaism can be noticed in cursive *ña*, flat or round-topped *ś* and oval form of *chha* and *tha*. Medials are as usual.

12th Century

Asoge Plates of Kadamba Jayakeśin II (A.D. 1133) and Nīlgunda Plates of Chālukya Vikramāditya VI (A.D. 1087 & 1123) are selected and illustrated in Tables E_{15} and E_{16} for the alphabets of 12th century in Karnataka. These inscriptions represent developed form of the letters. Initial vowel *i* presents its transitional feature. *Ai* is formed by adding a top-stroke of *e* medial in the initial *e*. Rare initial *au* looks like topless *a*. The tailless or bulgy form of *e* display archaism. The advanced and modern form of *cha* occurs in Asoge Plates, while in other inscriptions of the period it is in old beaked or transitional broader shape. A new innovation may be marked in *sha* in which cross-bar is placed horizontally in straight line form (Pl. 122). Among the consonants development is yet to be recorded in *gha*, *ja, dha, pha and bha*.

Among ligatures, the peculiar form of *ksha*, dotted *ṅ*, oval *chha* are noteworthy (Pl. 149). The most notable peculiarity among the medial vowels is the frequent use of perpendicular type of *e*.

The concluding phrase *śri-Śāradāyai namaḥ* of Nīlgunda Plates is written in Śāradā alphabet, a feature which is probably due to the fact that the scribe, Mallaya, hailed from Kashmir.

13th Century

Table F_8 is derived from the Copper plate grants of Hoysala Vira-Ballāla II (A.D. 1204). R.S. Panchamukhi remarks about the palaeography that, "the inscription is written in the Nāgarī alphabet which furnishes one of the earliest specimens of the Nandi-Nāgarī that subsequently became the ruling alphabet of the Vijayanagara period."[10]

The letters of Nandi-Nāgarī become compact and consequently diverges from corresponding Nāgarī characters. Calligraphically, the new alphabet is not as much appealing as Nāgarī. As for individual letters, the lower extremity of the outer curves in *a* and *u* are bent downwards and *e* retains tailless old feature. *Gha* places its notched shape horizontally. However, the left limb of *cha* is in triangular looped shape. The lower curve of *ja* is shortened and bends down. *Ḍa* presents two forms of the letter, one looks like initial *u* and other denotes usual Nāgarī shape with the difference of less prolongation in lower extremity. Left arm of *ṇa* is straight and its three arms are approximately equal. The head-mark of *tha* disappears and upper left limb is detached from the right vertical. The upper portion of *dha* is formed by two strokes arranging in notched shape. The left looped protion of *na* is slanted. Right appendage of *pha* starts from the head-mark. Advanced and modern looking form for ba occurs in this inscription. *Ra* looks somewhat like old and is of slanted foot-marked variety. The joining bar of the letter *la* is notched and the outer curve bends sharply inwards which sometimes becomes looped. Among ligatures, subscribed *chha* retains oval shape and *ya* of *dhyā* shows peculiarity.

In the formation of medial vowels some peculiarities are noticeable. Medial *ā*, *i*, *ī* are denoted by fully extended line side by side with short line. *U* bends its extremity down. A peculiar shape for medial *u* appears in *ru* which is formed by a rightward stroke. An additional leftward stroke is added in the form of *u* to make it long *ū*. This shape becomes the peculiarity of Nandi-Nāgarī. The rightward stroke form for *ṛi* occurs in this inscription which becomes common in Nandi-Nāgarī. Medial *e* and *o* are represented by top-stroke. In *ai* and *au* both the forms, i.e. top-stroke and perpendicular are to be found.

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22. Harsauda inscription of Devapala of A.D. 1218, Burgess & B. L. Indraji, *ICTWI*, pp. 11-12, last plate.

23. Dhanta image inscription of Somasimha of A.D. 1220, C. L. Suri, *EI*, XXXVII, pp. 209-11, Pl. f. p., 211.
24. Mandhata plates of Devapala of A.D. 1225, F. Kielhorn, *Ibid.*, IX, pp. 103-16, Pls. b. pp. 110-11; (Table N_{39}).*
25. Bhilsa inscription of the time of Jayasimha of A.D. 1263, D. C. Sircar, *Ibid.*, XXXV, pp. 187-88, Pl. f. p., 187.
26. Pathari inscription of the time of Jayasimhadeva II of A. D. 1269, Ramsharma, *Ibid.*, XXXVIII, pp. 33–34, Pl. f. p., 34.
27. Mandhata plates of Jayasimha-Jayavarman of A.D. 1274, D. C. Sircar, *Ibid.*, XXXII, pp. 138-56, Pls. b. pp. 148-49, 150-51, 154-55 & f. p., 156; (Table F_4).*
28. Girvad stone inscription of the time of Pratapasimha, H. V. Trivedi, *CII*, VII, Pl. II, pp. 270-77, Pl. LXXXII.

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2. A Chahaman inscription of A.D. 1132, C. L. Suri, *Ibid.*, XXXVII, pp. 163-64, Pl. f. p., 164.
3. Nadol plates of Kirtipala of A.D. 1161, Ram Karna, *IA*, XL, pp. 144-47, Pls. b. pp. 144-45; (Table E_{11}).*
4. Bamner plate of Kelhana of A.D. 1163 & 1166, M. B. Garde, *EI*, XIII, pp. 206-11, Pls. b. pp. 208-209.
5. Anvalda pillar inscription of Somesvara and Prithviraja III, G. S. Gai, *Ibid.*, XXXVII, pp. 278-81, Pl. f. p., 281.
6. Menal inscription of the time of Prithviraja of A.D. 1169, Ram Sharma, *Ibid.*, XXXVIII, pp. 155-58, Pl. f. p., 320.
7. Barla inscription of the time of Prithviraja III of A.D. 1177, D. C. Sircar, *Ibid.*, XXXII, pp. 299-304, Pl. f. p., 303.

8. Two Songira Chauhan inscriptions from Barlut of A.D. 1226 & 1273, Sircar & Ramesh, *Ibid.*, XXXVI, pp. 33-38, Pls. b. pp. 36-37.
9. Menal inscription of Meghanand of A.D. 1255, Ram Sharma, *Ibid.*, XXXVII, pp. 155-58, Pl. f. p., 158.
10. Nun inscription of Sodhadeva of A.D. 1279, C. L. Suri, *Ibid.*, XXXVII, pp. 305-06, Pl. f. p., 306.
11. Inscription of the time of Hammir of Ranthambhor of A.D. 1288, *Ibid.*, XIX, pp. 45-52, Pl. f. p., 50; (Tables F_5 & N_{40}).*
12. Varda inscription of Samantasimha of A.D. 1290, C. L. Suri, *Ibid.*, XXXVIII, pp. 43-54, Pl. f. p., 45.

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2. Kadmal plates of Guhila Vijayasimha of A.D. 1083, A. K. Vyas, *EI*, XXXI, pp. 237-48, Pls. b. pp. 246-47; (Table D_{10}).*
3. Dubkund inscription of Kachchhapaghata Vikramasimha of A.D. 1088, *ASIR*, XX, Pls. XXI & XXIII.
4. Kalanjar inscription of A.D. 1090, S. L. Katare, *EI*, XXXI, pp. 163-66, Pl. f. p., 165.
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6. Lucknow Museum plate of Kirtipala of A.D. 1110, F. Kielhorn, *EI*, VII, pp. 93-98, Pls. b. pp. 96-97.
7. Paldi inscription of Guhila Arisimha of A.D. 1116, A. K. Vyas, *Ibid.*, XXX, pp. 8-12, Pl. f. p., 10; (Tables E_{10} & N_{41}).*
8. Kamauli plate of Singar Vatsaraja of A.D. 1134, F. Kielhorn, *Ibid.*, XI, pp. 130-33, Pls. b. pp. 24-25.

9. Jain inscription from Shergarh of A.D. 1134, D. C. Sircar, *Ibid.*, XXXI, pp. 81-86, Pl. f. p., 84.
10. Mahaban prasasti of A.D. 1150, G. Bühler, *Ibid.*, II, pp. 275-79, Pls. b. pp. 274-75.
11. Delhi Siwalik inscription of Visaladeva of A.D. 1163, F. Kielhorn, *IA*, XIX, pp. 215-19, Pl. f. p., 218.
12. Durgapur pedestal inscription of A.D. 1169, *ASI, ARIE,* 1963-64, p., 64 (132), Pl. II.
13. Sihawa inscription of Kakair Karnaraja of A.D. 1192, Hira Lal, *EI*, IX, pp. 182-87, Pl. f. p., 186; (Table E_8).* .
14. Two inscriptions of Ajayapaladeva of A.D. 1192 & 1194, Ramasharma, *Ibid.*, XXXVIII, pp. 132-34, Pls. b. pp. 132-33.
15. Machhalisahar plate of Harischandradeva of Kanauja of A.D. 1196, Hirananda, *Ibid.*, X, pp. 93-100, Pls. b. pp. 98-99.
16. Bhopal plates of Udayavarman of A.D. 1199, J. F. Fleet, *IA*, XVI, pp. 252-56, Pls. b. pp. 256-57; (Table E_9).*
17. Jhansi inscription of Sallakshanasimha, F. Kielhorn, *EI*, I, pp. 214-17, Pl. f. p., 216.
18. Thakarda inscription of the time of Surapaladeva, R. R. Halder, *IA*, LVI, pp. 216-17, Pl. f. p., 226.
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20. Chittoragarh inscription, *ASI, AREI*, 1956-57, p., 84 (473), Pl. III.
21. Pujaripali inscription of Gopaladeva, V. V. Mirashi, *CII*, IV, Pl. XCIV.
22. Thankpar plates of Somavamsi Pamparajadeva of A.D. 1213 & 1214, *Ibid.*, Pl. XCVI (A-B).
23. Bhera-Ghat inscription of A.D. 1218, *ICTWI*, p. 105-11, Pl. inscription I.

24. Unchahra fragmentary inscription of A.D. 1237, D. C. Sircar, *EI*, XXXIII, pp. 121-24, Pl. f. p., 124.
25. Jain inscription at the Temple of Neminath on Mount Abu of Tejapal of A.D. 1230, H. Lüders, *Ibid.*, VIII, pp. 219-22, Pl. f. p., 212.
26. Baraudi inscription of the time of Gopala of A.D. 1279, D. C. Sircar, *Ibid.*, XXXIII, pp. 31-35, Pl. f. p., 34; (Table N_{42}).*
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28. Inscriptions of the time of Gopala of A.D. 1281 & 1284, D. C. Sircar, *Ibid.*, XXXI, pp. 323-36, Pls. b. pp. 326-27.
29. Inscription of A.D. 1283 from Survaya, M. S. Bhat, *Ibid.*, XXXVIII, pp. 263-66, Pl. f. p., 264.
30. Two inscription of the time of Ganapati of A.D. 1293 & 1298, D. C. Sircar, *EI*, XXXII, pp. 339-46, Pls. f. pp. 342 & 346.
31. Budhera inscription of A.D. 1294, D. C. Sircar, *Ibid.*, XXXIII, pp. 163-66, Pl. f. p., 165.
32. Lal-Darwaja Masjid inscription of A.D. 1296, *ASIR*, XI, Pl. XXXVII (3).
33. Fragmentary. Yajvapala inscription from Narwara, D. C. Sircar, *EI*, XXXIII, pp. 65-70, Pl. f. p., 68.
34. Ajayagadh inscription, *ASIR*, XXI, Pls. XIII-XIV.
35. Rajaghat inscription of Bhimadeva, D. C. Sircar, *EI*, XXXII, pp. 277-82, Pl. f. p., 281.
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2. Miraj plates of Jayasimha II of A.D. 1024, L. D. Barnett, *EI*, XII, pp. 303-15, Pls. b. pp. 312-13.
3. Mumdaka grant of Bhimadeva of A.D. 1029, G. S. Gai, *Ibid.*, XXXVII, pp. 35-37, Pl. f. p., 36.
4. Copper–plates of Somesvara I of A.D. 1047, *IAR*, 1974-75, Pl. XLVIII.
5. A Copper–plate grant of Trilochanapala of A.D. 1050, H. H. Dhruva, *IA*, XII, pp. 196-205, Pls. b. pp. 202-03; (Table N_{43}).*
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7. Bhadresvar plates of Bhimadeva I of A.D. 1060, G. S. Gai, *Ibid.*, XXXVII, pp. 37-40, Pl. f. p., 39; (Table D_{11}).*
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9. Two sets of Chalukya copper plate from Navasari of A.D. 1074, G. V. Acharya, *JBBRAS*, XXVI, pp. 250-64, Pl. f. p., 264.
10. Tilgundi grant of Tribhuvanamalla of A.D. 1083, S. P. Pandit, *IA*, I, pp. 80-84, Pls. b. pp. 80-81.
11. Sitabaldi inscription of the time of Vikramaditya VI of A.D. 1086, F. Kielhorn, *EI*, III, pp. 304-06, Pl. f. p., 306.
12. Nilagund plates of Vikramaditya VI of A.D. 1087 & 1123, L. D. Barnett, *Ibid.*, XII, pp. 142-55, Pls. b. pp. 152-53; (Table E_{16}).*
13. Sunak plates of king Karna I of A.D. 1091, E. Hultzsch, *Ibid.*, I, pp. 316-18, Pls. b. pp. 316-17.
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15. A Chalukya grant of A.D. 1207, E. Hultzsch, *IA*, XI, pp. 337-40, Pls. b. pp. 338-39.

16. Patan plates of Bhimadeva II, H. H. Dhruva, *IA*, XI, pp. 71-73, Pls. b. pp. 72-73.
17. Veraval inscription of Bhima II, V. P. Joharapurkar, *EI*, XXXIII, pp. 117-20, Pl. f. p., 120; (Table E_{12}).*
18. Mount Abu inscription of the reign of Bhimadeva II of A.D. 1230, H. Lüders, *EI*, VIII, pp. 200-29, Pls. f. pp. 212 & 222.
19. Veraval inscription of Arjuna of A.D. 1264, D. C. Sircar, *Ibid.*, XXXIV, pp. 143-52, Pl. f. p., 148; (Table F_6).*
20. Desan inscription of the time of Karna of A.D. 1297, C. C. Das Gupta, *Ibid.*, XXXIV, pp. 153-56, Pl. f. p., 152.

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2. Thana plates of Arikesarin of A.D. 1017, *Ibid.*, Pl. XXI.
3. Inscriptions of Chittaraja of A.D. 1026-1034, *Ibid.*, Pls. XXII-XXXIV; (Table D_{14}).*
4. Thana plates of Nagarjuna of A.D. 1039, *Ibid.*, Pls. XXXV-XXXVI.
5. Inscriptions of Mummuniraja of A.D. 1048-1060, *Ibid.*, Pls. XXXVII-XLIV; (Table N_{44}).*
6. Inscription of Anantadeva I of A.D. 1081-1094, *Ibid.*, Pls. XLV-L; (Table D_{15}).*
7. Talale and Kolhapur inscriptions of Gandaraditya of A.D. 1110-1126, *Ibid.*, Pls. XCII-XCVI & C-CI; (Table$_{13}$).*
8. Inscriptions of Aparaditya of A.D. 1127-1138, *Ibid.*, LI-LVII.
9. Panhale plates of Vikramaditya of A.D. 1139, *Ibid.*, Pls. LVIII-LXI.
10. Inscriptions of Haripaladeva of A.D. 1148-1154, *Ibid.*, LXII-LXV.
11. Chiplun and Bassein inscriptions of Mallakarjuna of A.D. 1156-1161, *Ibid.*, Pls. LXVI-LXVII.

12. Inscriptions of Aparaditya II of A.D. 1184-1186, *Ibid.*, Pls. LXVIII-LXX.
13. Kolhapur inscription of Bhoja II of A.D. 1190-93, *Ibid.*, Pl. CXII-CXIII; (Table E_{14}).*
14. Bassein stone inscription of Anantadeva II of A.D. 1198, *Ibid.*, Pl. LXXI; (Table N_{45}).*
15. Inscriptions of Keshideva II of A.D. 1203-39, *Ibid.*, Pls. LXXII-LXXIV.
16. Ranvad inscription of Somesvara of A.D. 1259, *Ibid.*, Pl. LXXV.
17. Chanje inscription of Somesvara of A.D. 1260, *Ibid.*, Pl. LXXVI.

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1. Savai-Vere plates of Guhalladeva II of A.D. 1038, M. G. Dikshit, *JUPHS*, XVIII, pp. 174-95, Pls. b. pp. 194-95.
2. Ittagi plates of Jayakeshi of A.D. 1062, *IA, AR*, 1974-75, Pl. XLVII; (Table D_{16}).*
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4. Asoge plates of Jayakeshin of A.D. 1133, G. H. Khare, *Ibid.*, XXVI, pp. 304-09, Pls. b. pp. 308-09; (Table E_{15}).*
5. Savaragaon inscription of Marudadeva of A.D. 1164, *Prachin Marathi Koriv Lekh, Pl. 13.*
6. Sadasivagad plates of Vijayaditya of A.D. 1180, P. B. Desai, *EI*, XXIX, pp. 29-32, Pls. b. pp. 30-31.
7. Dodavad plates of Jayakeshi III of A.D. 1209, R. N. Guruv, *JESI*, III, pp. 43-68, Pls. f. pp. 48, 50, 52 & 54.
8. Gadivore grant of Sharthadeva II of A.D. 1262, G. S. Gai, *EI*, XXXIV, pp. 107-12, Pls. b. pp. 108-09.

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2. Two Yadava charters from Devalali of A.D. 1052, S. Sankaranarayanan, *EI*, XXXVII, pp. 74-84, Pls. b. pp. 80-81.
3. Asvi Plates of Airamadeva of A.D. 1098, G. S. Gai, *Ibid.*, XXXVI, pp. 249-56, Pls. b. pp. 252-53.
4. Yadava Inscription of A.D 1141, B. L. Indraji, *IA*, XII, pp. 119-29, Pl. f. p., 126.
5. Yadava Inscription from Patan of A.D. 1153, Bühler, *Ibid.,* VIII, pp. 39-42, Pl. f. p., 40.
6. The Sakalesvara Temple inscription of Kholesvara of A.D. 1228, *YIAJ,* Pl. f. p., 5.
7. The Yogesvari Temple inscription of Kholesvara, *Ibid.,* Pl. f. p., 37.
8. Prakasa inscription of Simhana's Time of A.D. 1234, Sircar & Subrahmanyam, *EI,* XXXVI, pp. 19-22, Pl. f. p., 21.
9. Karalahalli grant of Simhana of A.D. 1238, J. F. Fleet, *JBBRAS,* XV, pp. 382-90, Pls. b. pp. 386-87.
10. Amba inscriptions of Simhana of A.D. 1240, *ASWI,* III, Pl. LVIII.
11. Dharwar plates of the time of Simhana, Sircar & Sankaranarayanan, *EI*, XXXIV, Pls. b. pp. 38-39, & f. p., 41.
12. The Ramanarayan Temple inscription of Lakshmi of A.D. 1240, *YIAJ*, Pl. f. p., 49.
13. Tasgaon plates of Krishna of A.D. 1250, G. H. Khare, *EI,* XXVII, pp. 206-16, Pls. b. pp. 212-13.
14. Methi inscription of Krishna of A.D. 1254, P. B. Desai, *Ibid.*, XXVIII, pp. 312-20, Pl. f. p., 319; (Table N_{46}).*
15. Kalegaon plates of Mahadeva of A.D. 1260, D. G. Kaparkar, *Ibid.*, XXXII, pp. 31-44, Pls. b. pp. 38-39 & 42-43; (Table F_7)*
16. Thana plates of the time of Ramachandra of A.D. 1272, L. D. Barnett, *Ibid.*, XIII, pp. 198-206, Pls. b. pp. 200-201.

17. Unkesvara inscription of Ramachandra of A.D. 1280, *Inscriptions from Nanded District*, Pl. XVIII.

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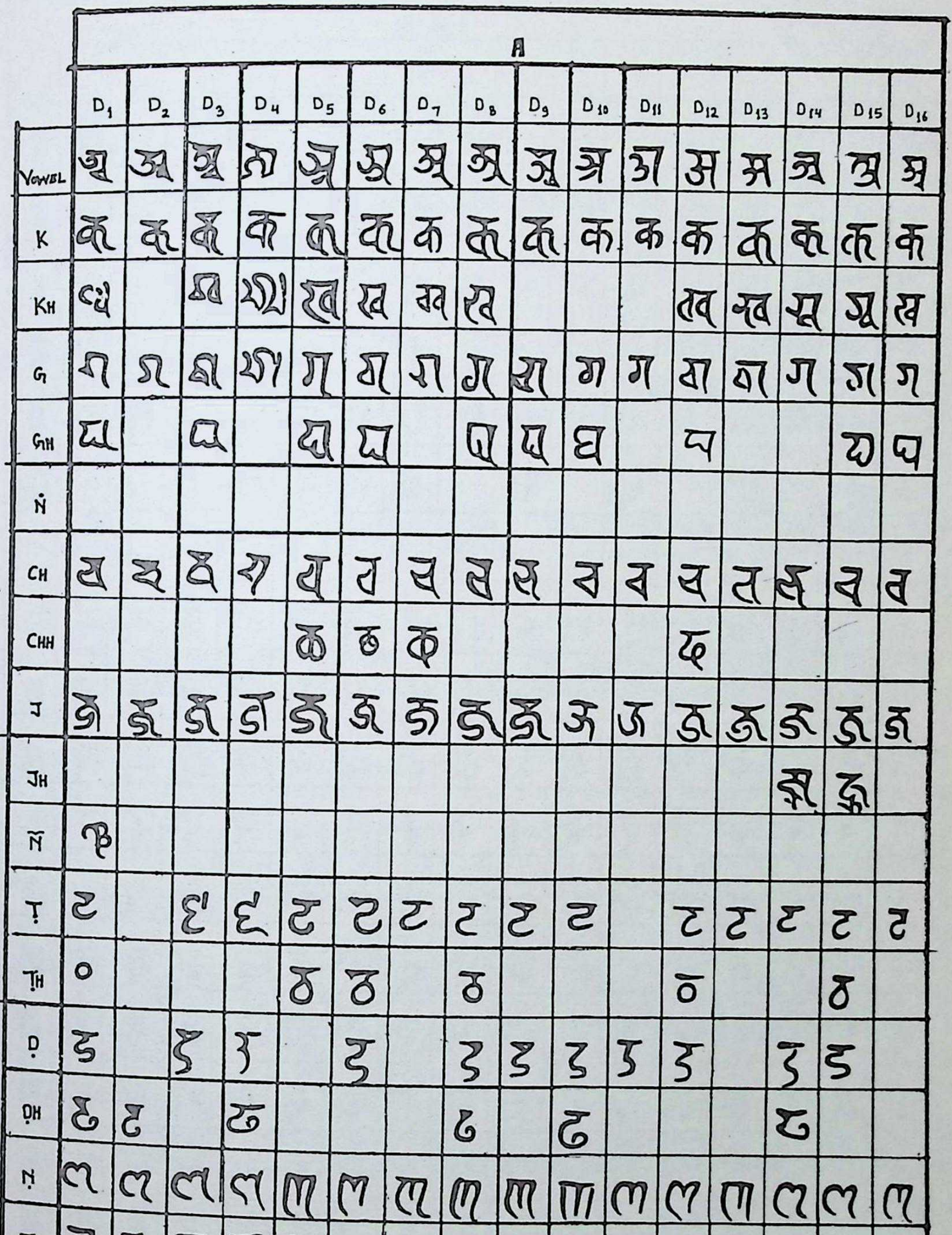
2. Kondguli inscription of Bhuvalokamalla of A.D. 1132, K. V. Ramesh, *Ibid.*, XXXVII, pp. 189-92, Pls. b. pp. 192-93.
3. Balsane inscription of the time of Krishna of A.D. 1184, M. G. Dikshit, *EI*, XXVI, pp. 309-13, Pl. f. p., 312.
4. Society's Museum plate of A.D. 1187, B. L. Indraji, *JBBRAS*, XII, pp. 329-35, Pl. f. p., 334.
5. Inscription of Kakatiya Ganapati of A.D. 1199, *IAR*, 1958-59, Pl. LXVIII.
6. Karnatak copper plate grant of Hoysala Vira-Ballala of A.D. 1204, *KI*, I, Pls. f. pp. 58, 60, 62 & 64; (Table F_8).*
7. Inscription from the Temple of Vastupal Tejapala of A.D. 1231, *ASWI*, *AKK*, Pl. XXXV.
8. Veraval inscription of A.D. 1246, F. Kielhorn, *EI*, III, pp. 302-04, Pls. b. pp. 306-07.
9. Grant of Maharajakula Jaitrasimhadeva of A.D. 1290, Sadhu Ram, *EI*, XXXII, pp. 220-28; (Table N_{47}).*

References for Plates 91-120
(11th Century)

Table	Inscription	Date in A.D.	Reference
D_1	Bihar grant of Saurāditya	1020	*EI*, XXXV. Pls. b. pp. 134-35.
D_2	Gauhāṭī grant of Indrapāla	—	*KŚ*, Pl. f. p., 91.
	Guākuchi grant of Indrapāla	—	*KŚ*, Pl. f. p., 102.
D_3	Mahulpara plates of Mahāśivagupta-Dharmarath	—	*EI*, XXXVII, Pls. b. pp. 228-29.
D_4	Naḍagām plates of Vajrahasta	1057	*EI*, IV, Pls. b. pp. 190-91.
D_5	Goharwā Plates of Karṇa	—	*CII*, IV, Pl. XL.
D_6	Chandrāvati plates of Chandra	1093 & 1099	*EI*, XIV, Pls. b. pp. 192-93 & f. pp. 196 & 198.
D_7	Rājapur plates of Madhurantak	1065	*EI*, IX, pls. b. pp. 178-79.
D_8	Sās-Bahū inscription of Mahīpāla	1093	*IA*, XV, Pl. f. p., 36.
D_9	Banswārā plates of Bhoja	1019	*EI*, XI, Pls. b. pp. 182-83.
D_{10}	Kadmāl plates of Vijayasimha	1083	*EI*, XXXI, Pls. b. pp. 246-47.
D_{11}	Paliād plates of Bhīma I	1055	*EI*, XXXIII, Pl. f. p., 236.
	Bhadreśvar plates of Bhīma I	1060	*EI*, XXXVII, Pl. f. p., 39.

D_{12}	Kauṭhem plates of Vikramāditya V	1008	*IA*, XVI, Pls. b. pp. 22-23.
D_{13}	Kalas-Budrukh plates of Bhillam III	1026	*IA*, XVII, Pls. b. pp. 118-19.
D_{14}	Bhaṇḍup plates of Chhittarāja	1026	*CII*, VI, Pls. XXII-XXIV
D_{15}	Kharepāṭaṇ plates of Ananta I	1094	*CII*, VI, Pls. XLVI-L.
D_{16}	Ittagi plates of Jayakeśi I	1062	*IA*, *AR*: 1974-75, Pl. XLVII.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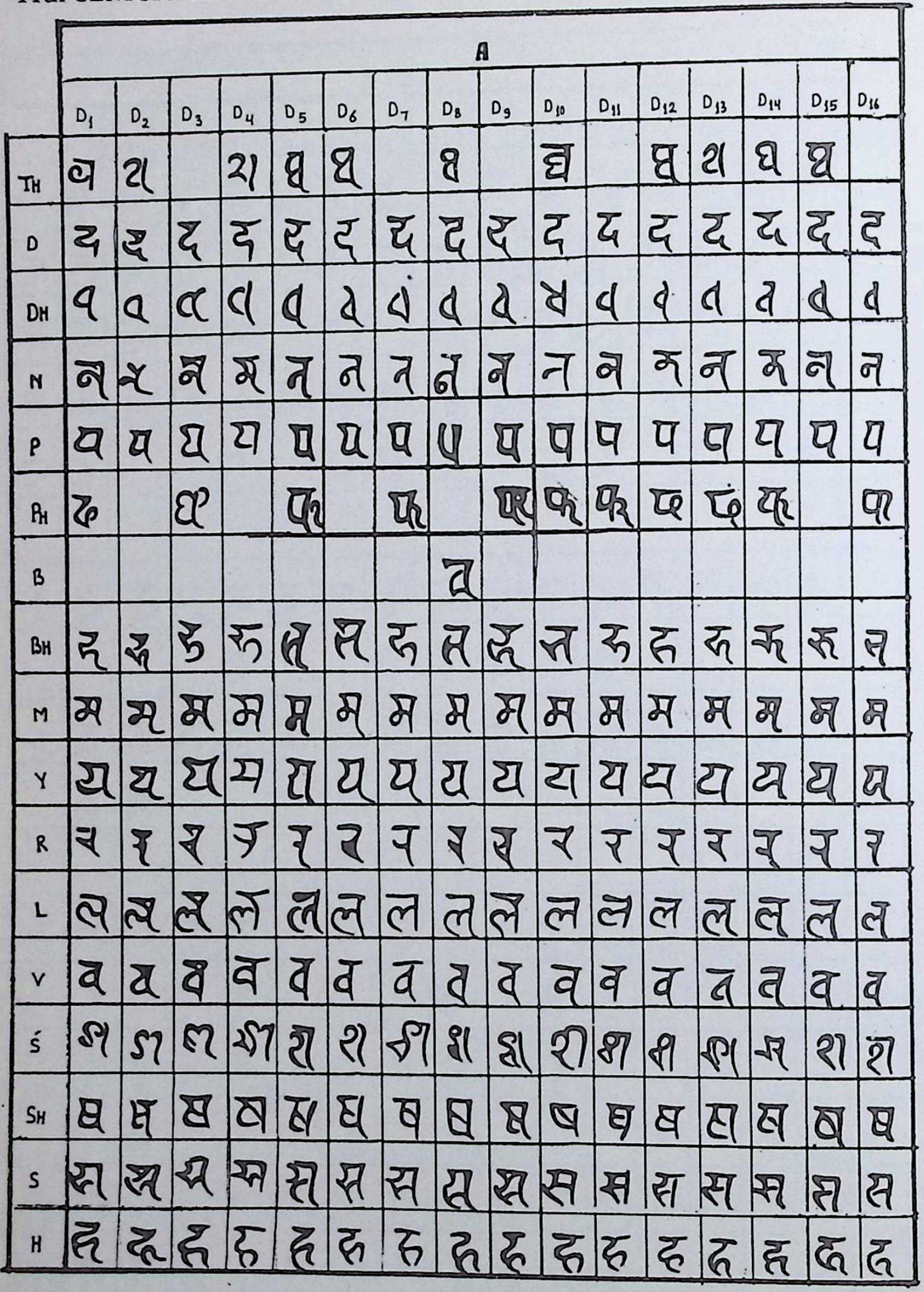
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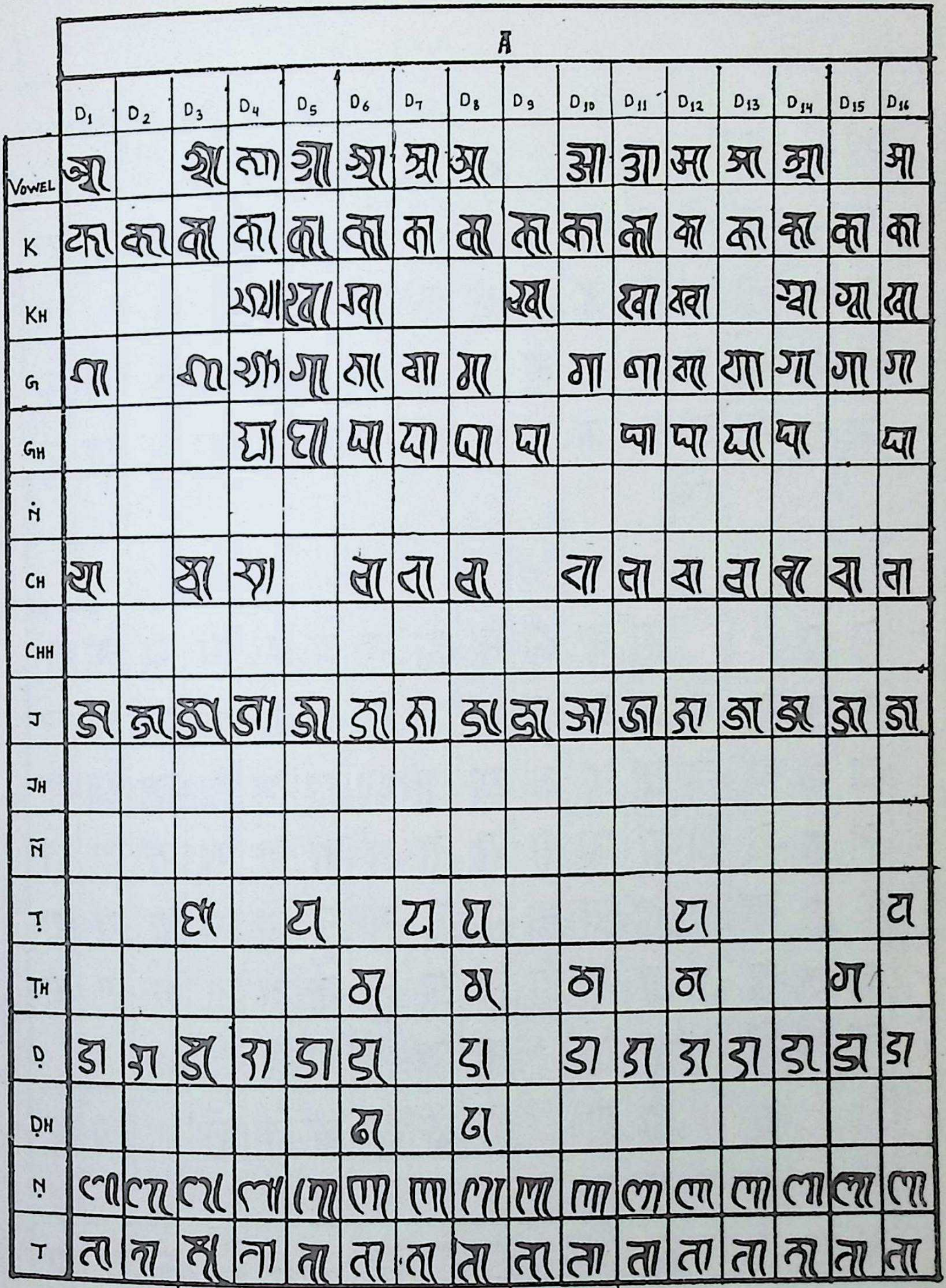
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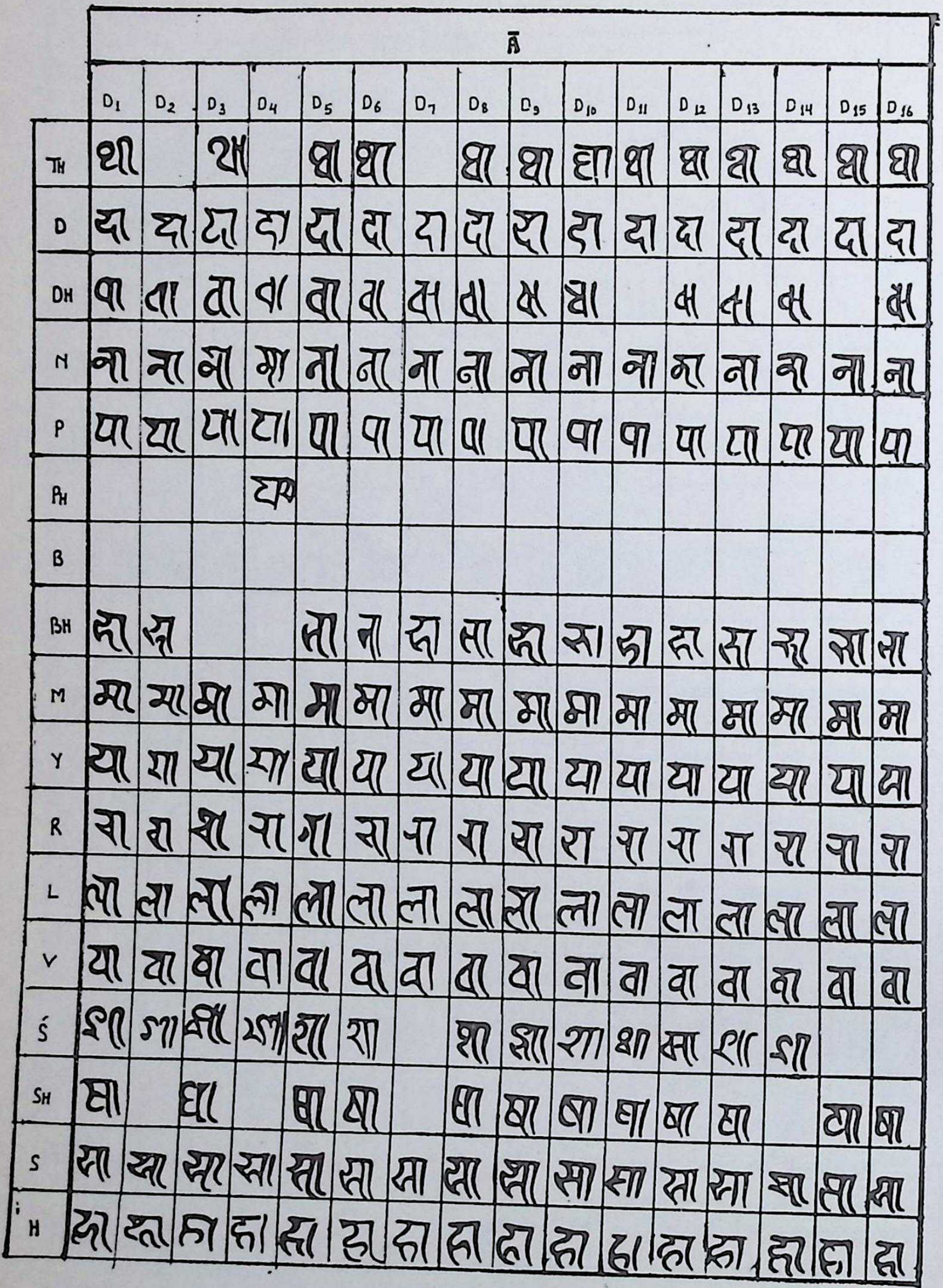
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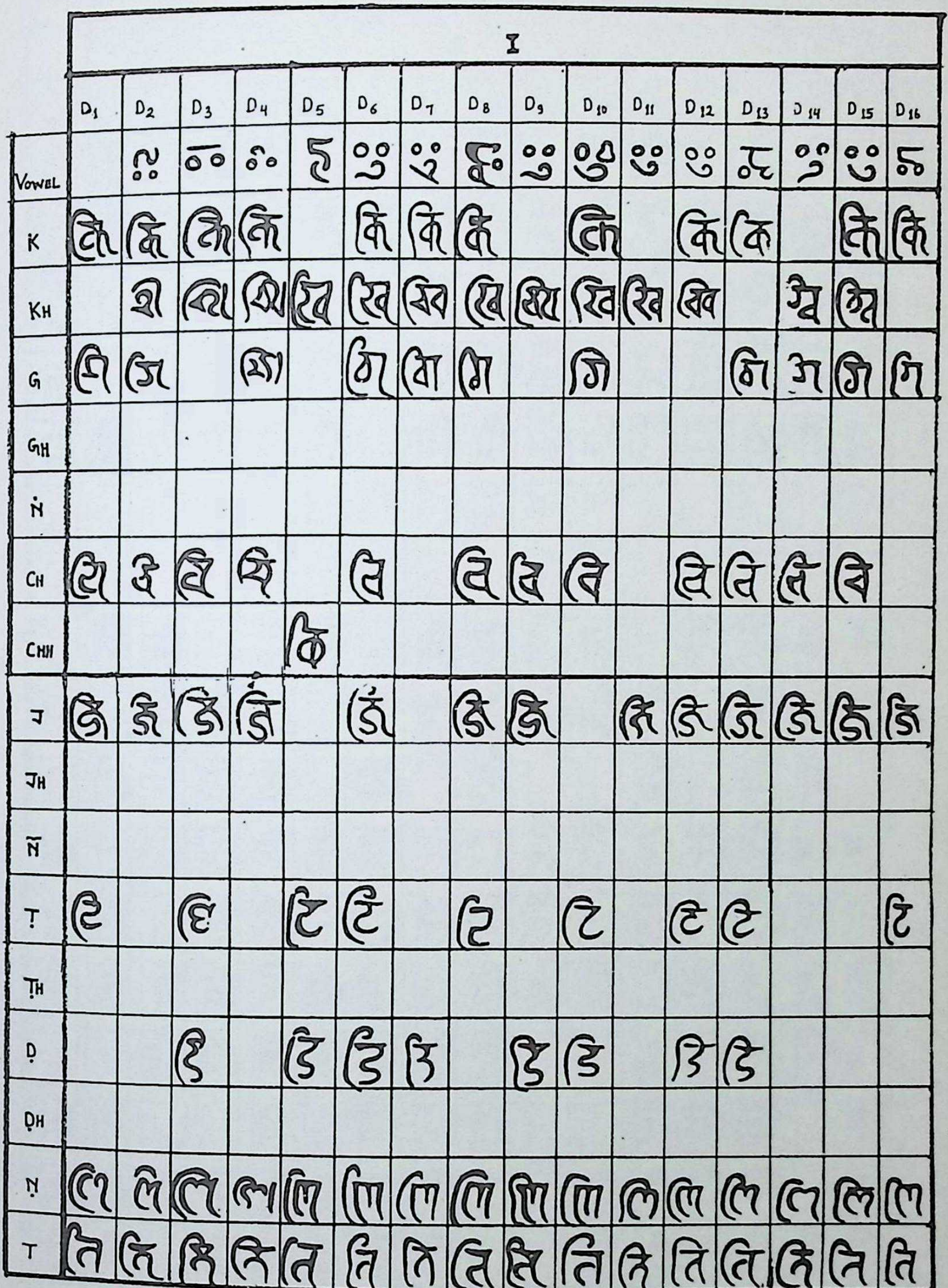
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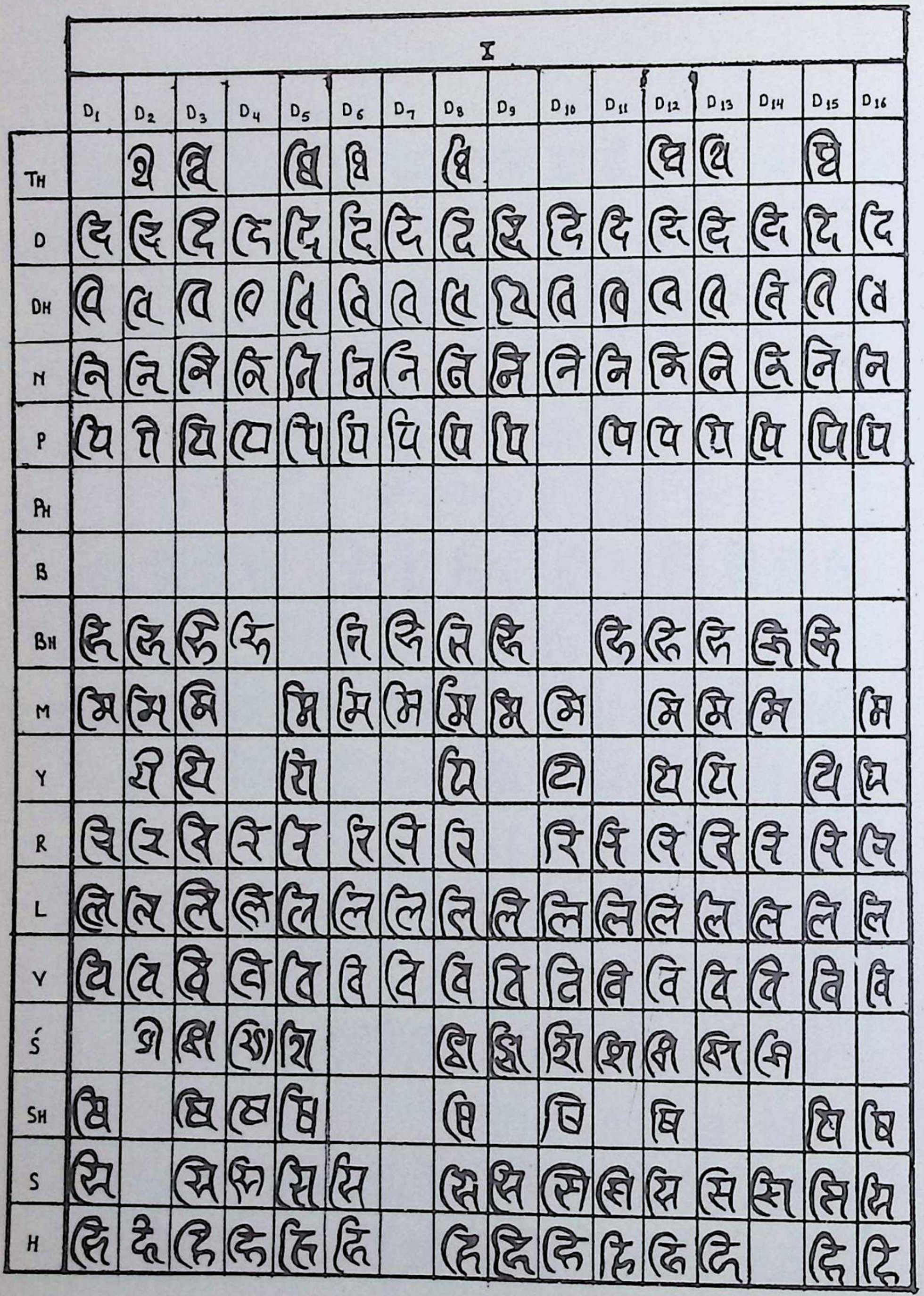
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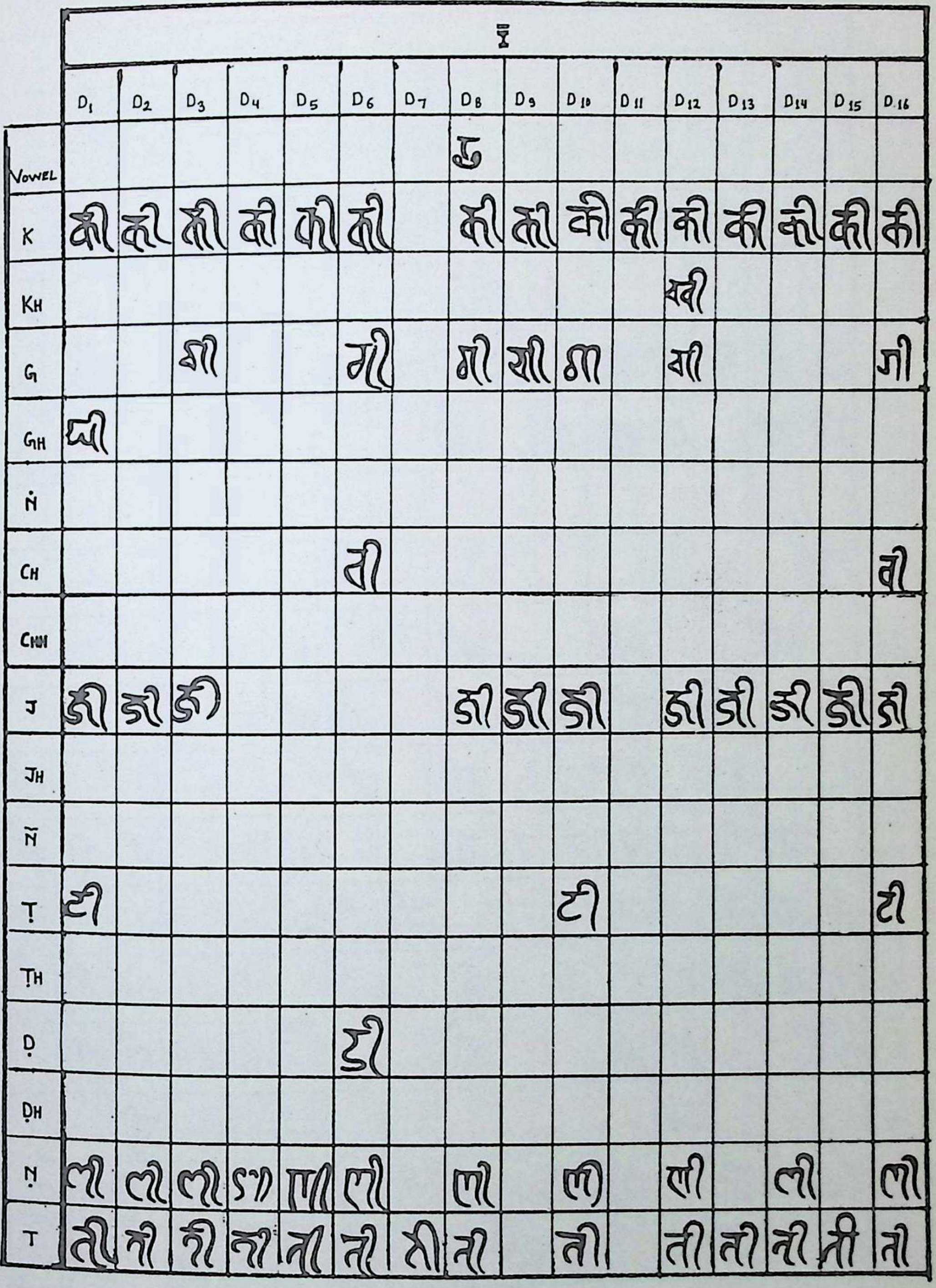
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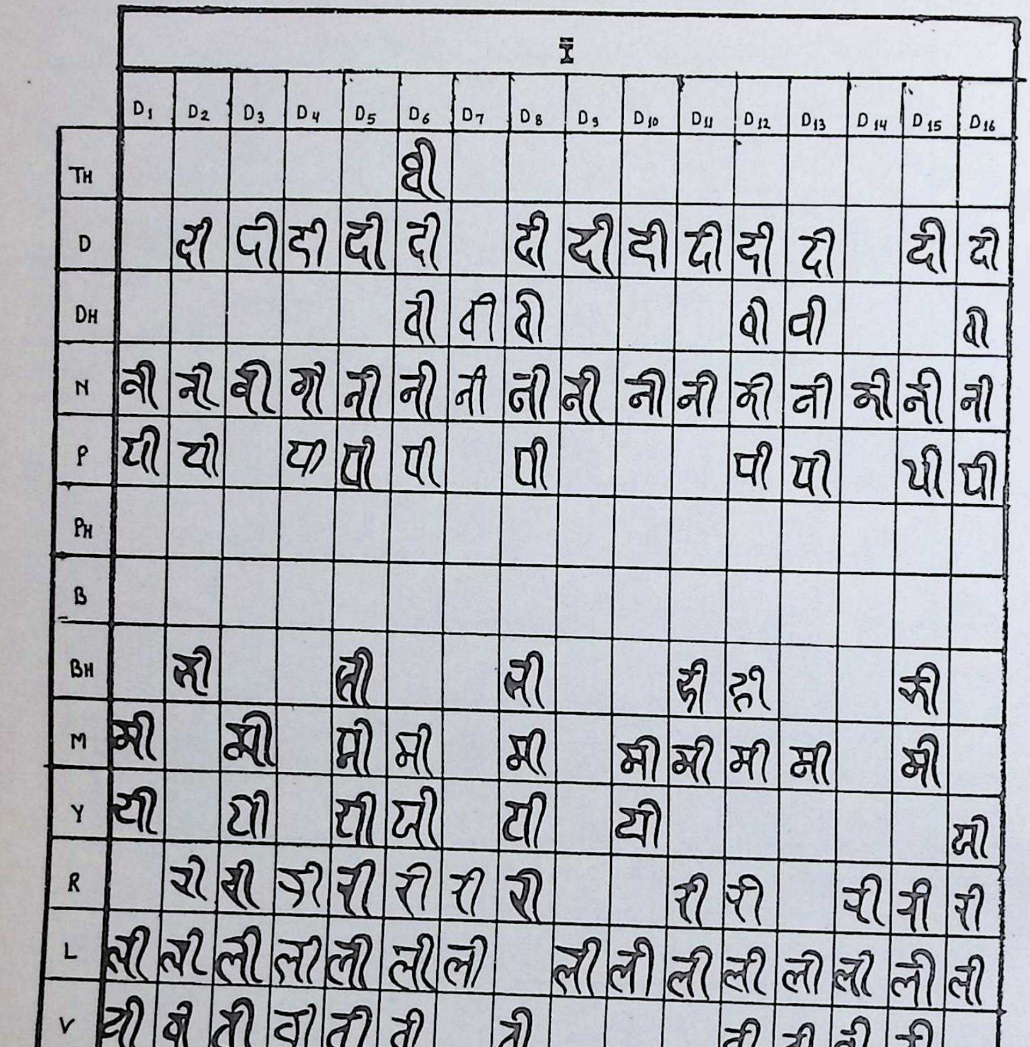
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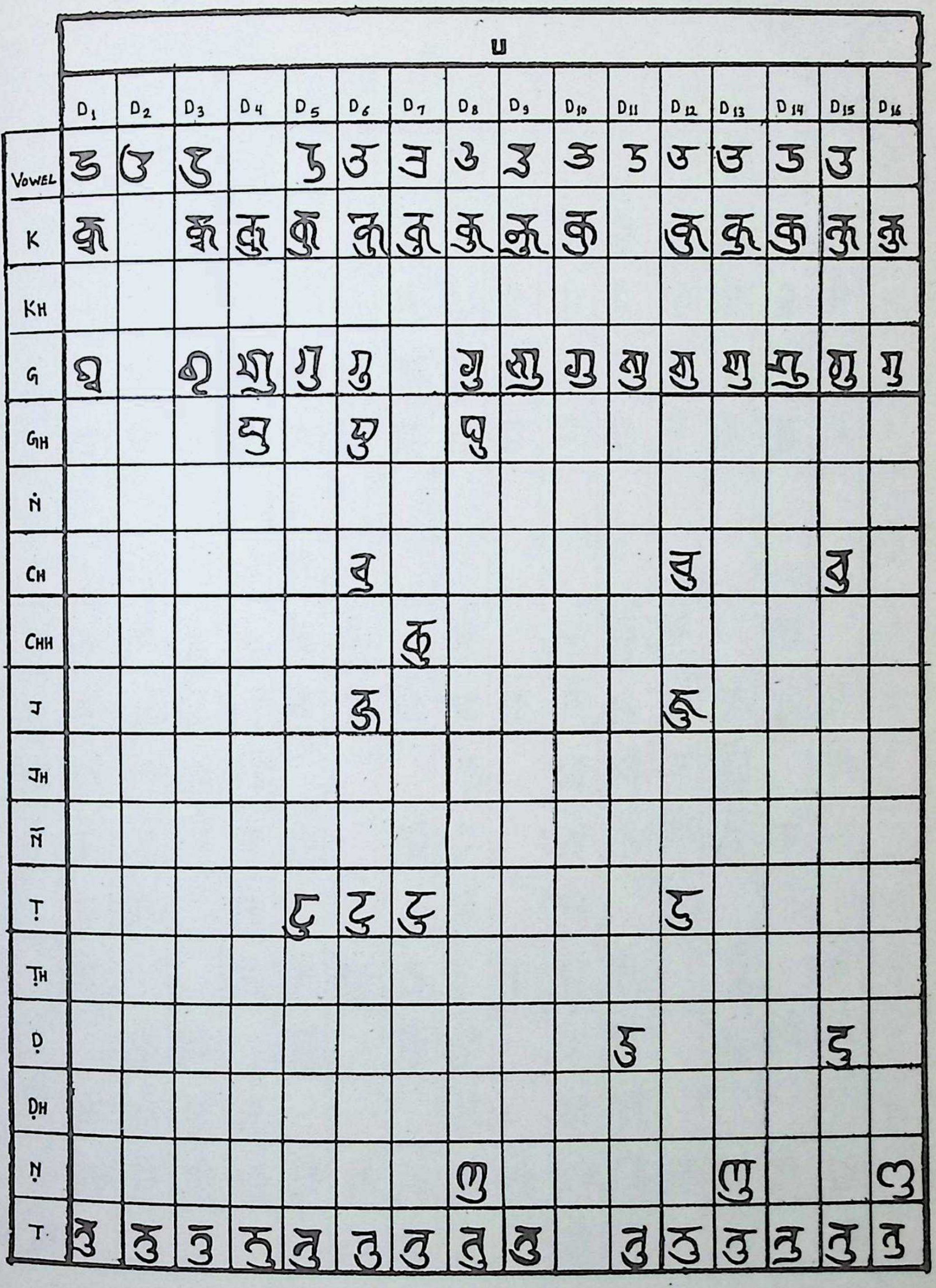
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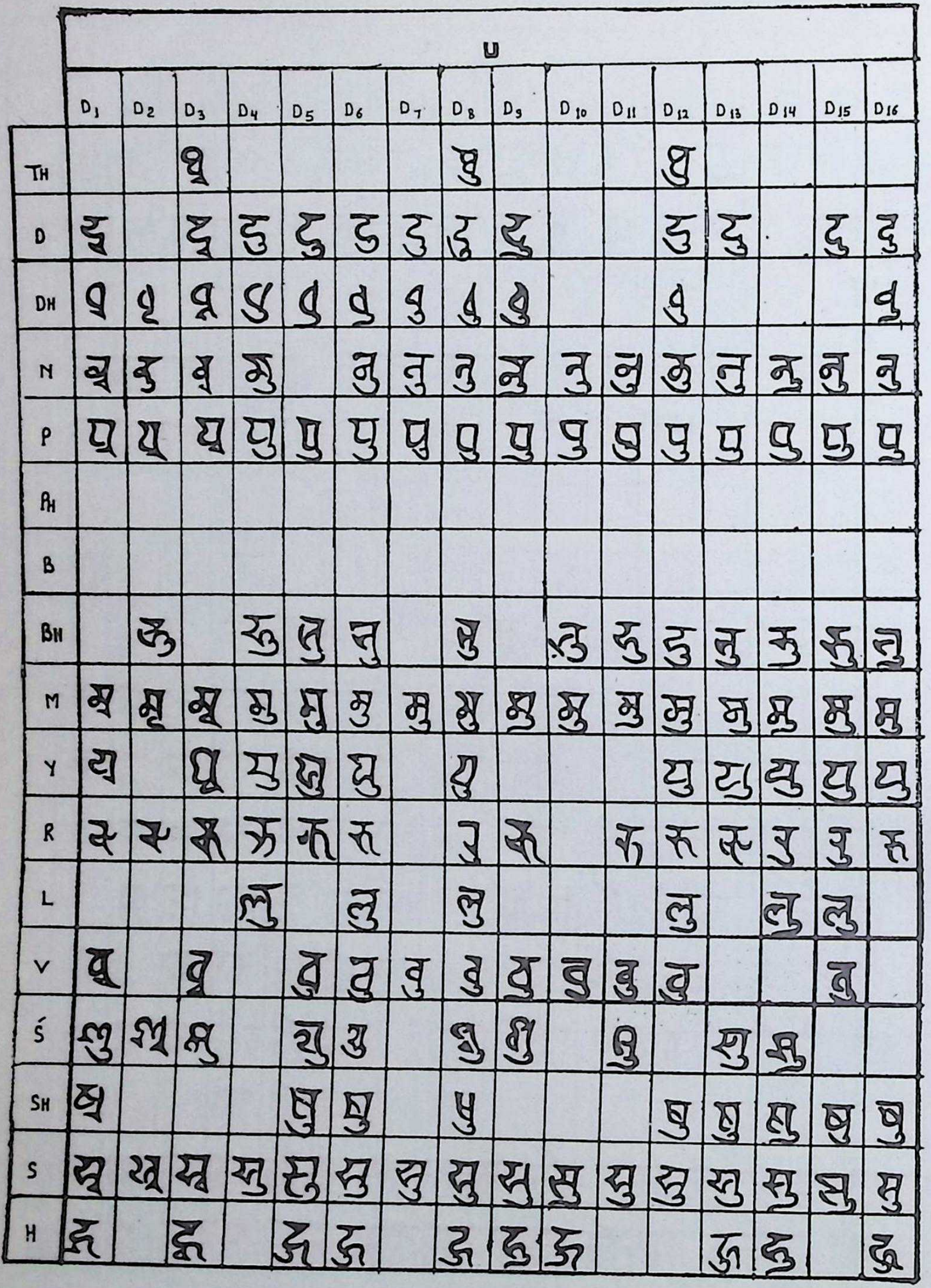
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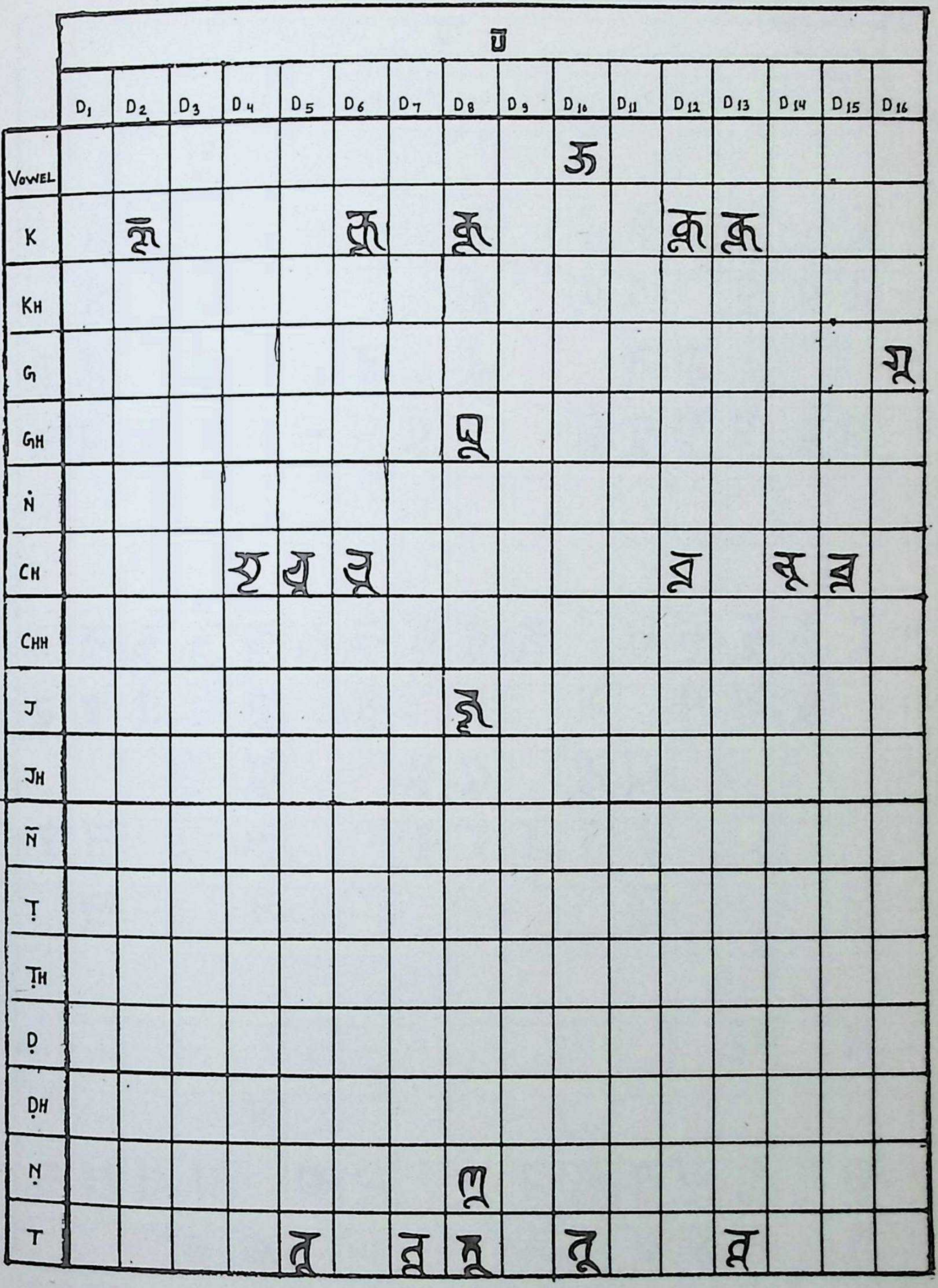

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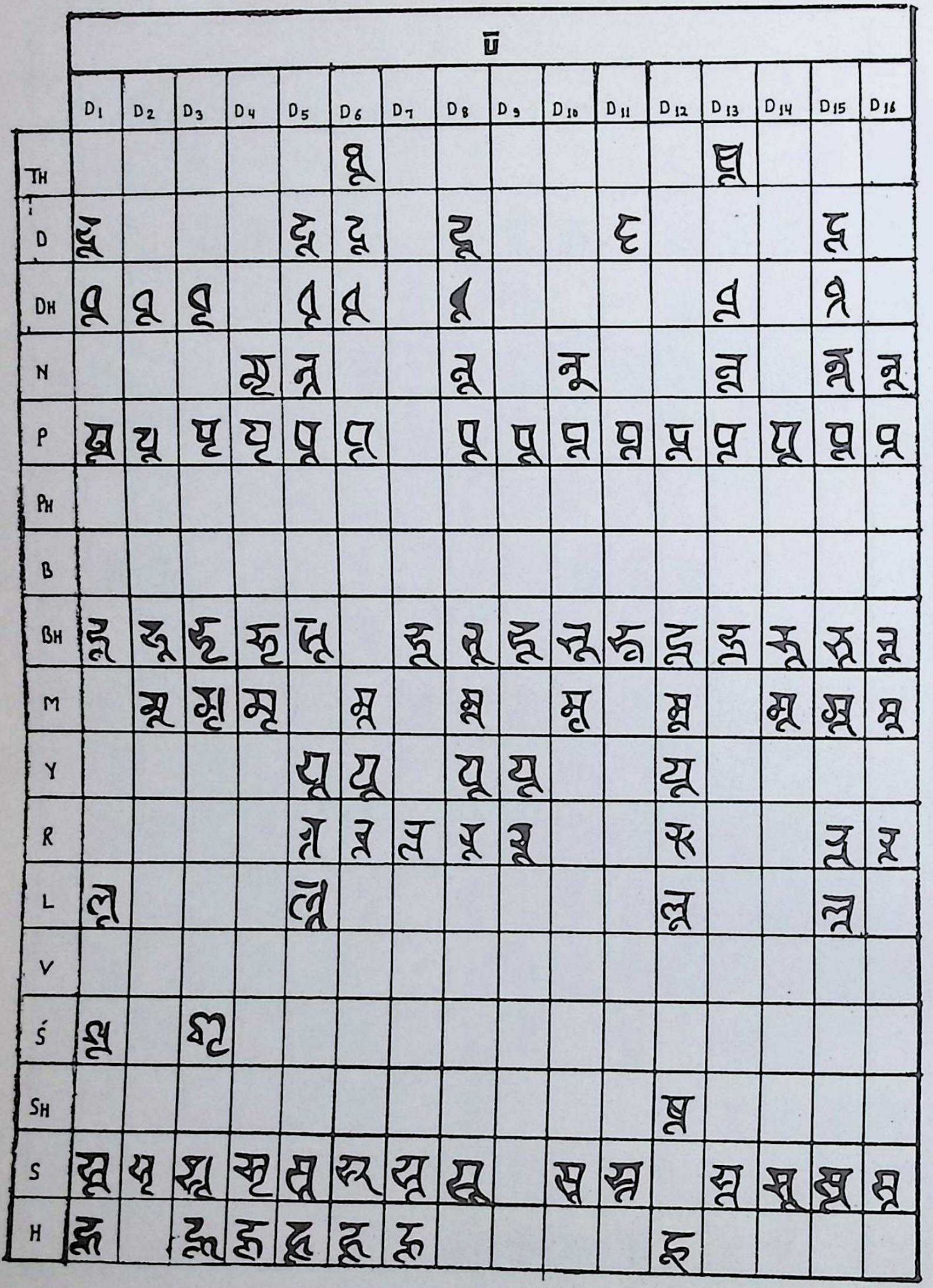
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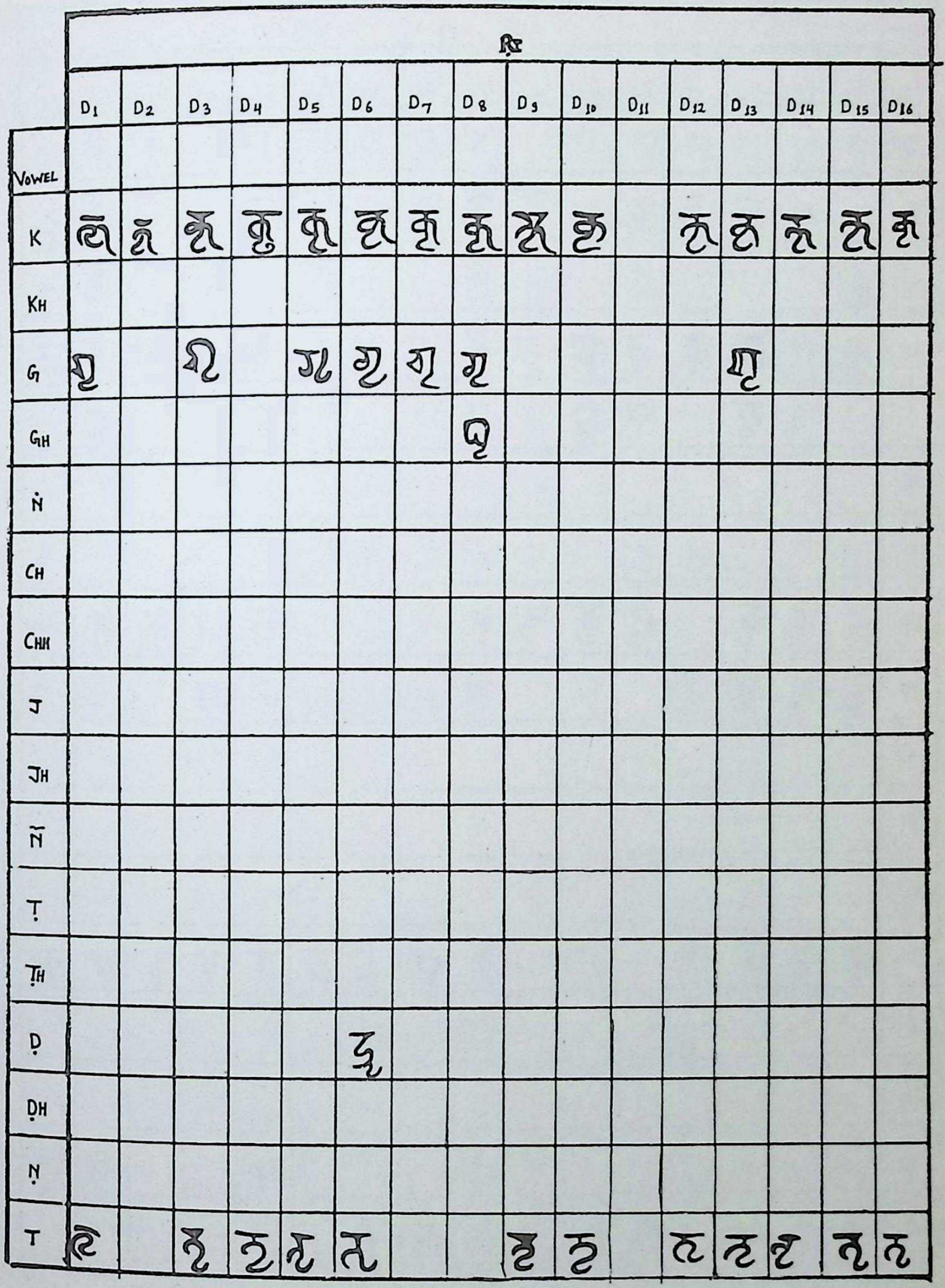
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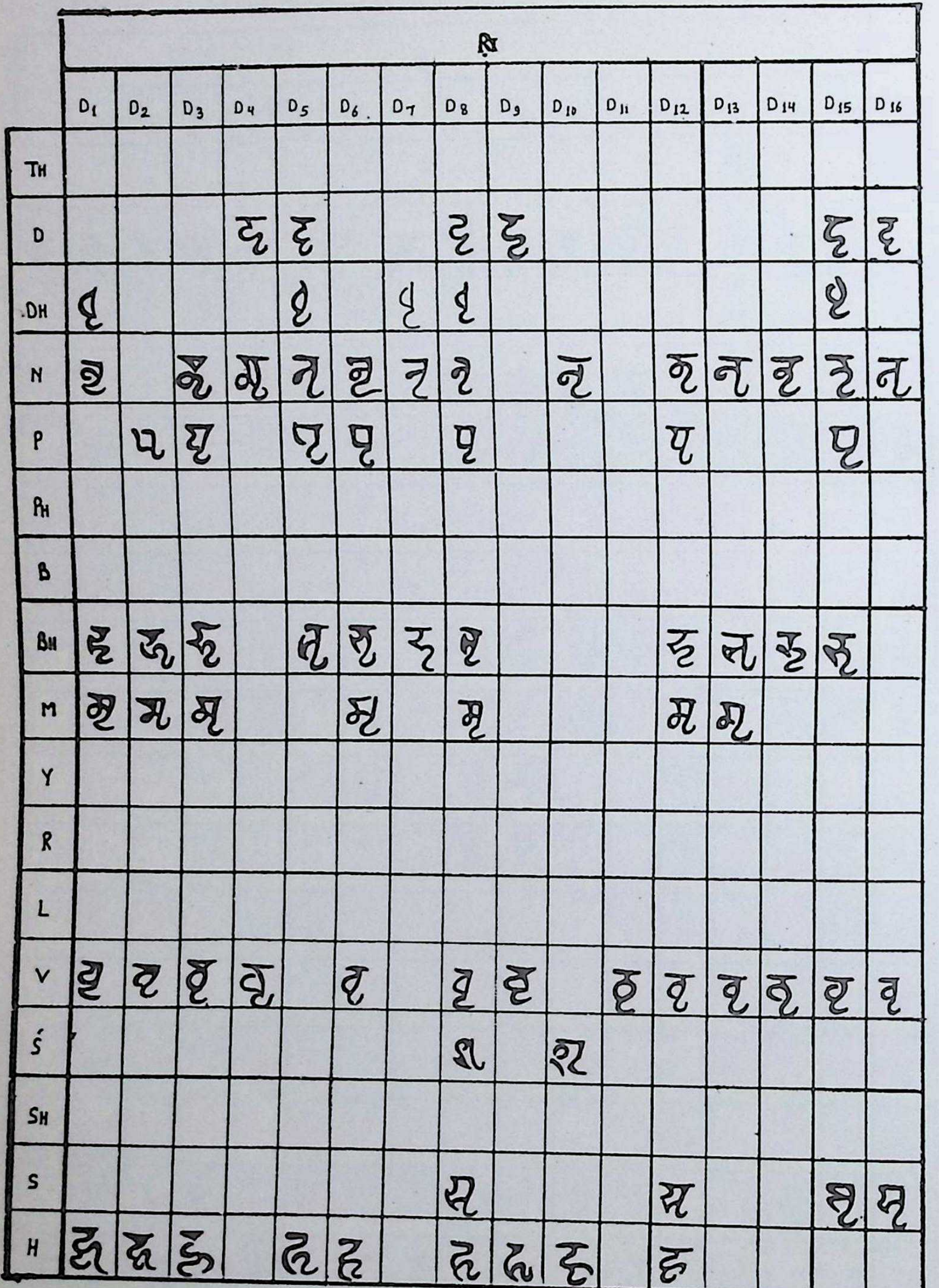

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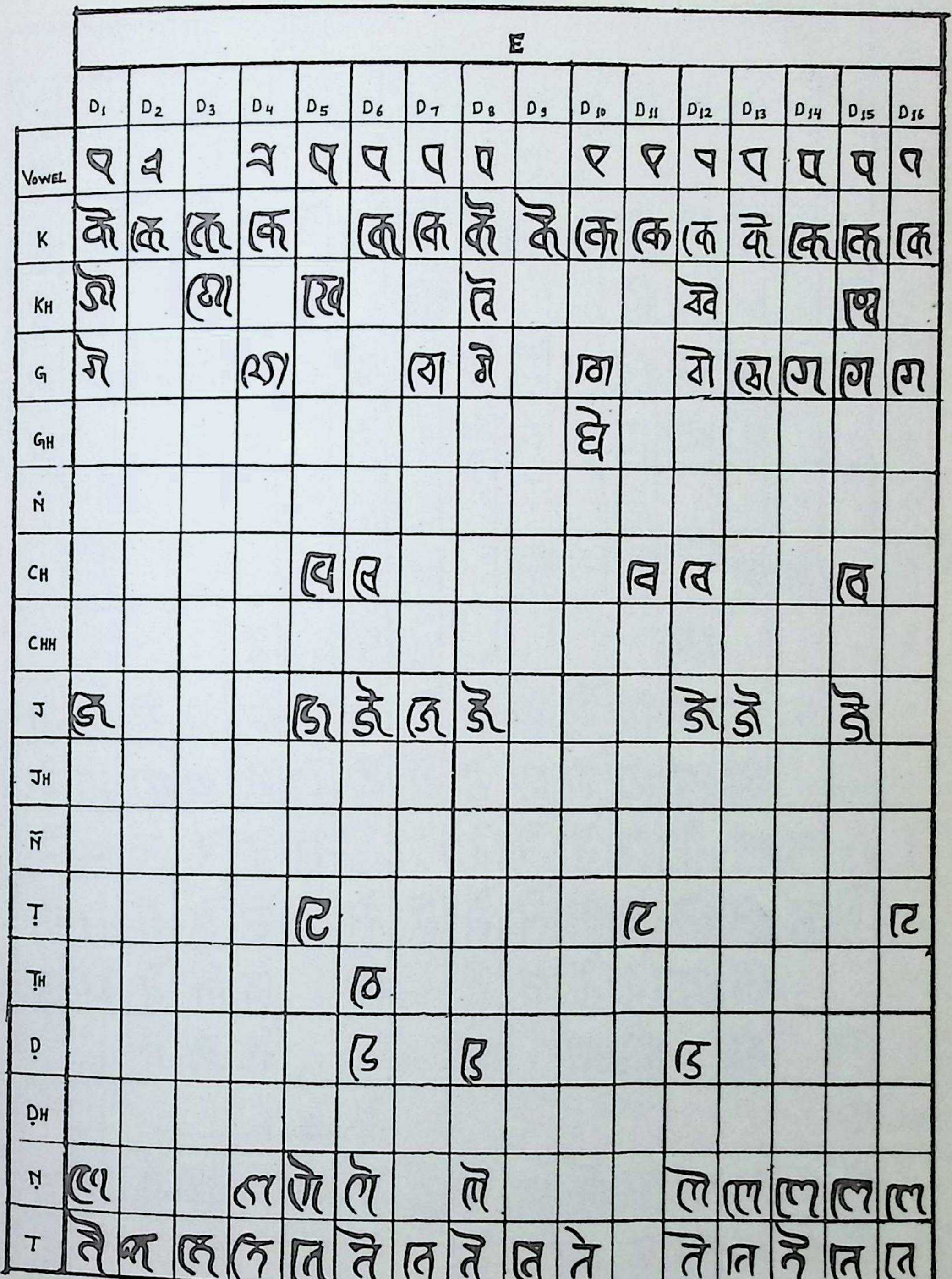
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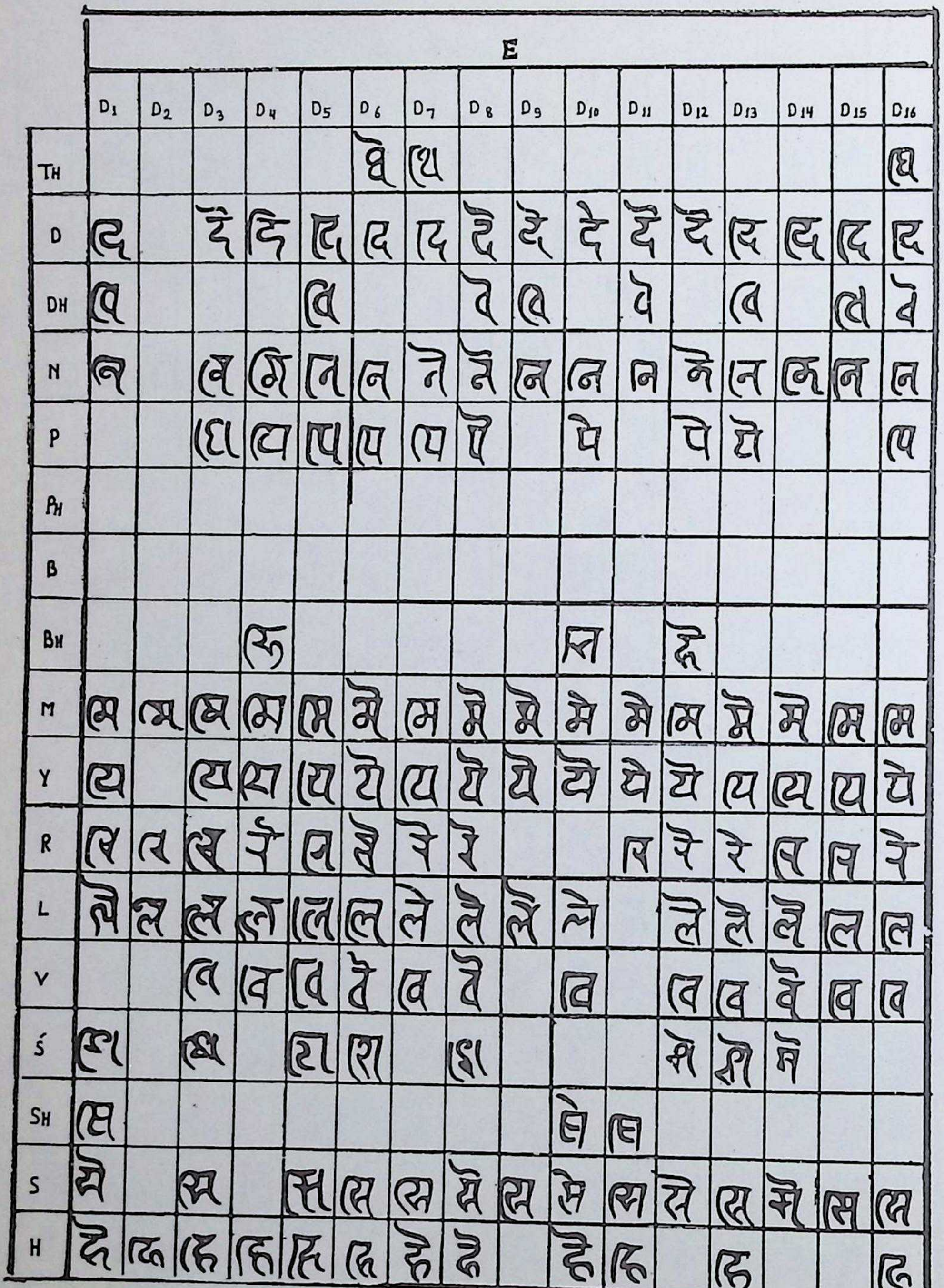
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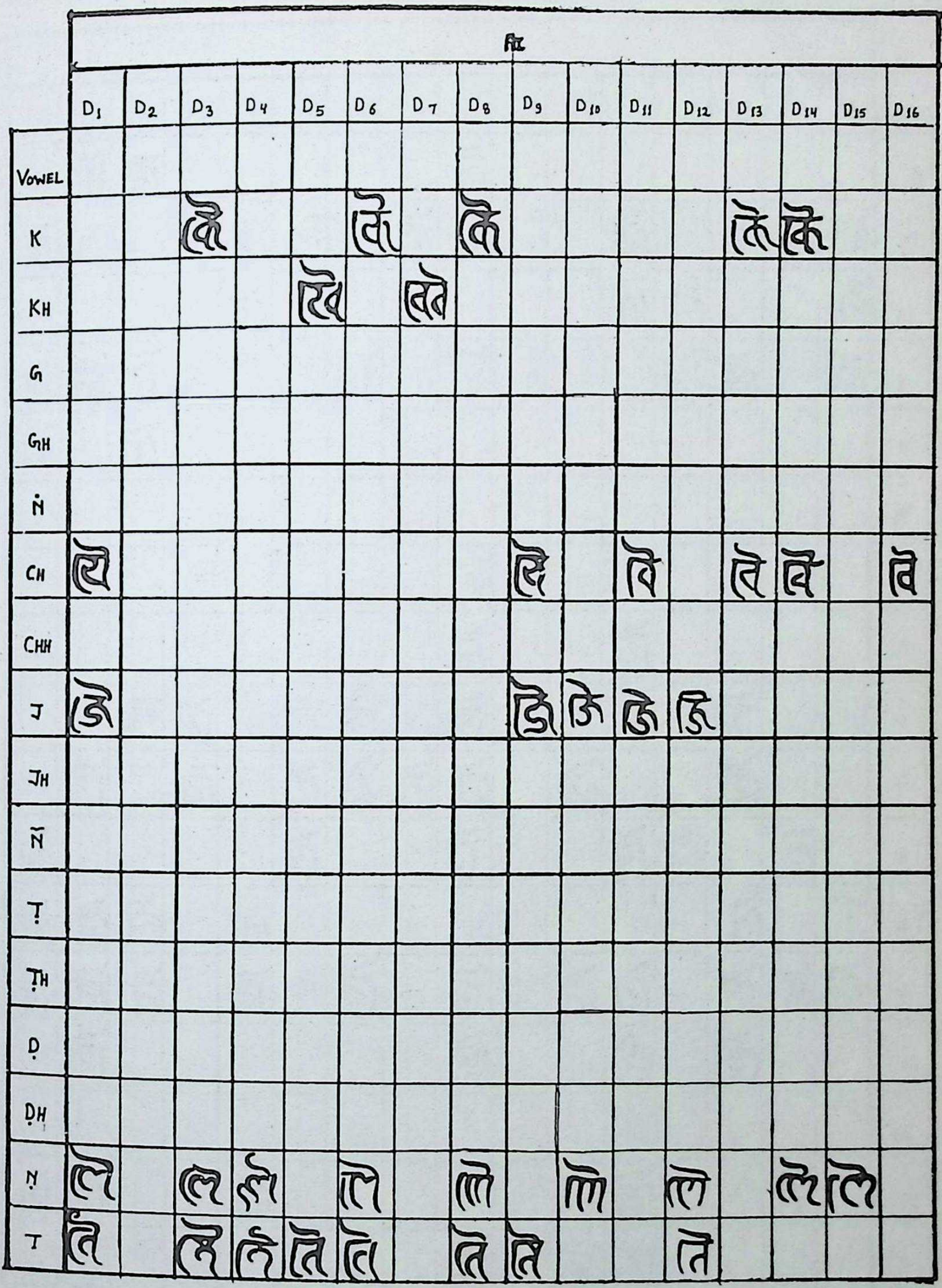
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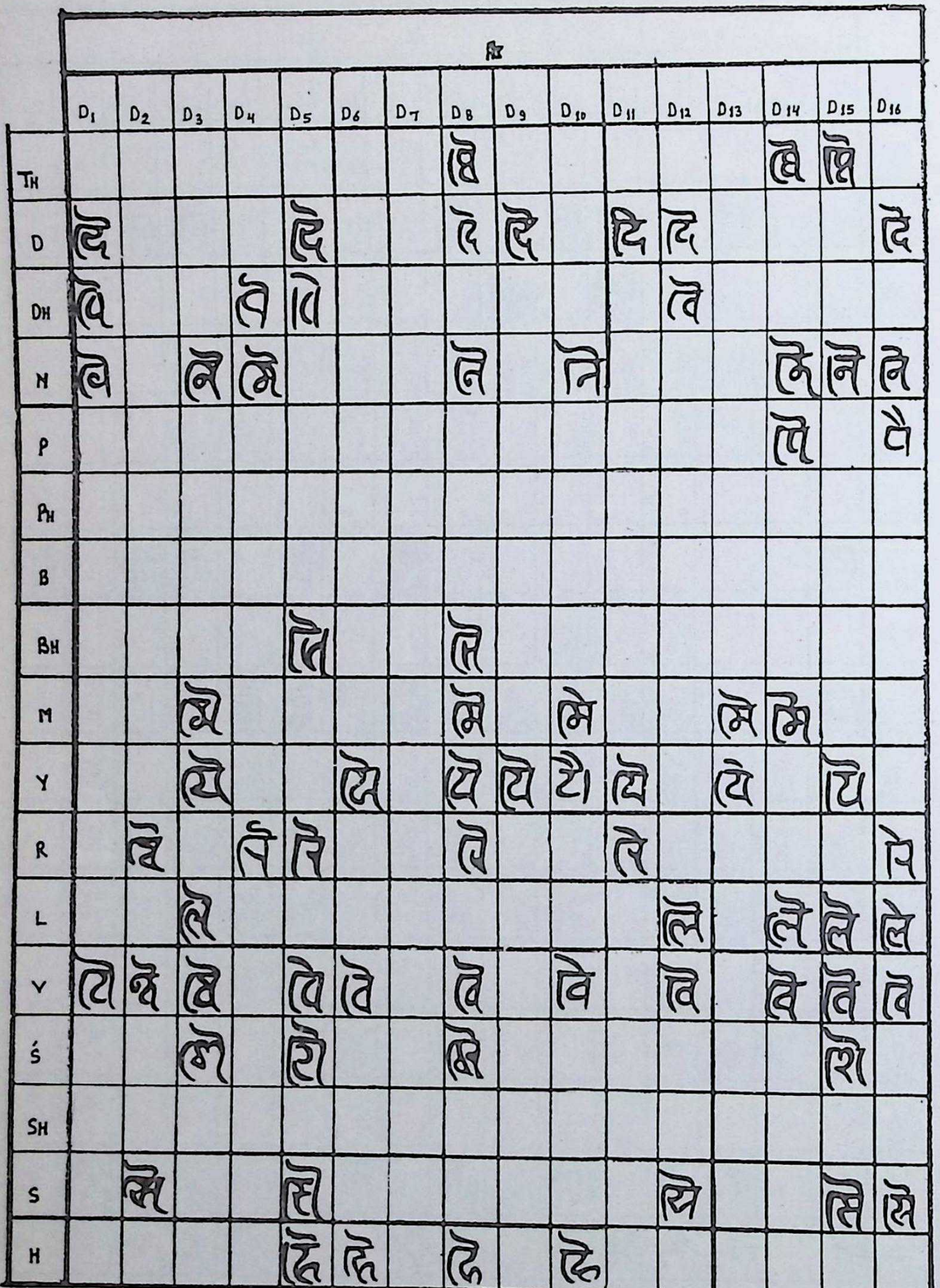

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DH	धे			धे	धे							धे				
N	ने		ने	ने				ने		ने				ने	ने	ने
P														पे		पे
PH																
B																
BH					भे			भे								
M			मे					मे		मे			मे	मे		
Y			ये			ये		ये	ये	ये	ये		ये		ये	
R		रे		रे	रे			रे			रे					रे
L			ले									ले		ले	ले	ले
V	वे	वे	वे		वे	वे		वे		वे		वे		वे	वे	वे
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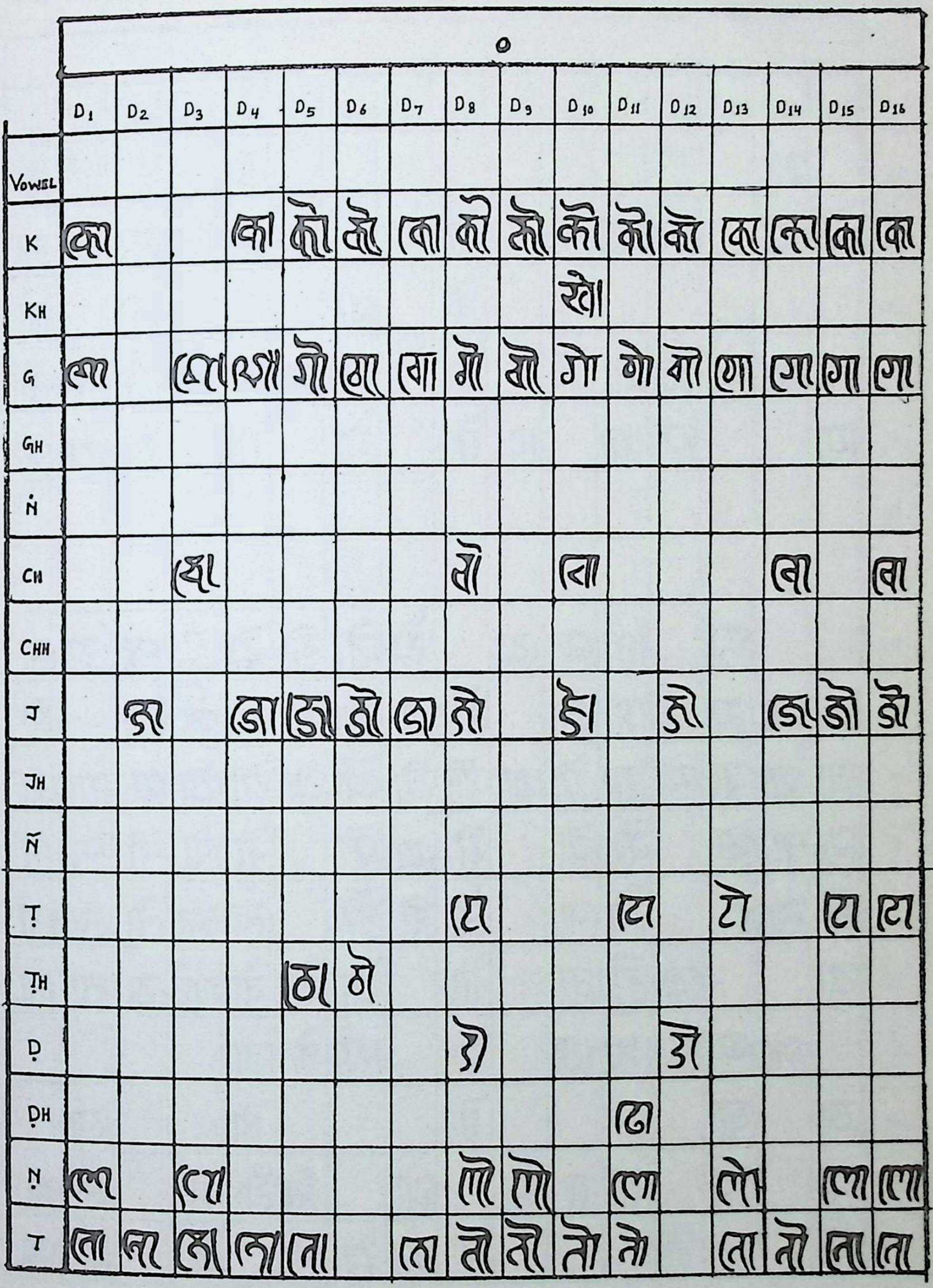
S		से			से							से			से	से
H					हे	हे		हे		हे						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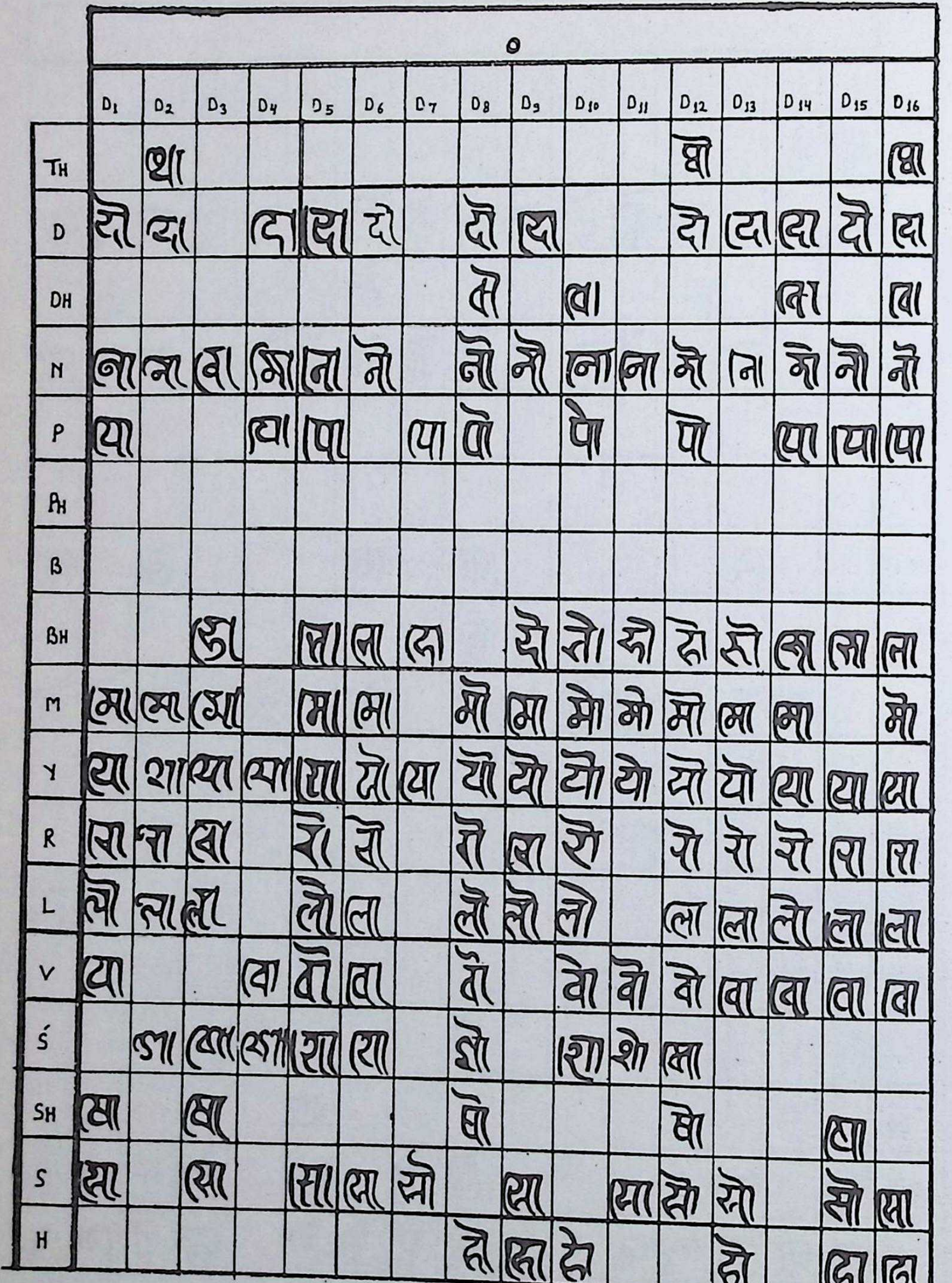
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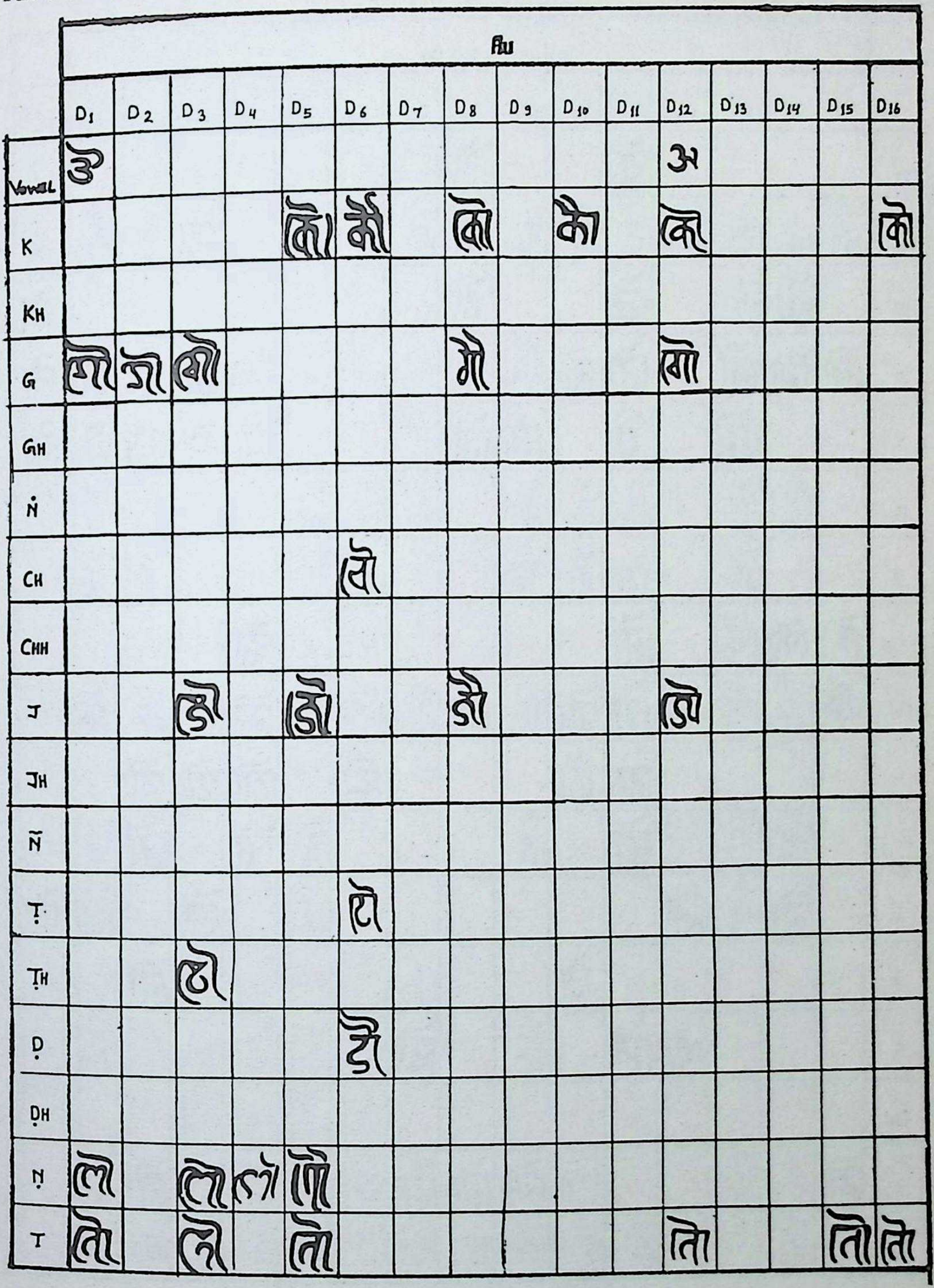

	Au															
	D_1	D_2	D_3	D_4	D_5	D_6	D_7	D_8	D_9	D_{10}	D_{11}	D_{12}	D_{13}	D_{14}	D_{15}	D_{16}
Vowel	औ											औ				
K					कौ	कौ		कौ		कौ		कौ				कौ
KH																
G	गौ	गौ	गौ					गौ				गौ				
GH																
Ṅ																
CH						चौ										
CHH																
J			जौ		जौ			जौ				जौ				
JH																
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Ṭ						टौ										
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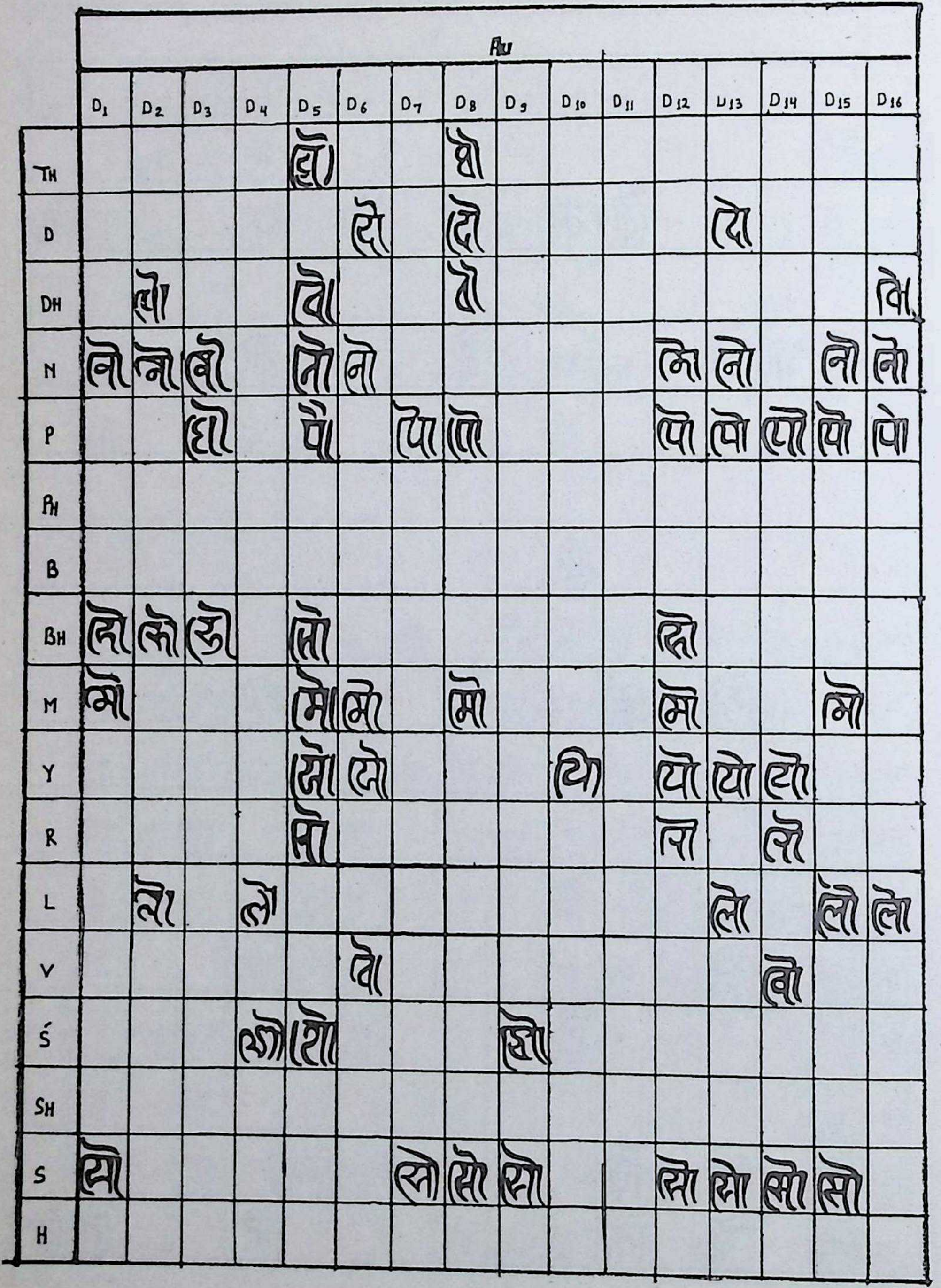
Ḍ						डौ										
ḌH																
Ṇ	णौ		णौ	णौ	णौ											
T	तौ		तौ		तौ							तौ			तौ	तौ



	Au															
	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	D15	D16
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N	नौ	नौ	नौ		नौ	नौ						नौ	नौ		नौ	नौ
P			पौ		पौ		पौ	पौ				पौ	पौ	पौ	पौ	पौ
PH																
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BH	भौ	भौ	भौ		भौ							भौ				
M	मौ				मौ	मौ		मौ				मौ			मौ	
Y					यौ	यौ				यौ		यौ	यौ	यौ		
R					रौ							रौ		रौ		
L		लौ		लौ									लौ		लौ	लौ
V						वौ								वौ		
Ś				शौ	शौ				शौ							
SH																
S	सौ						सौ	सौ	सौ			सौ	सौ	सौ	सौ	
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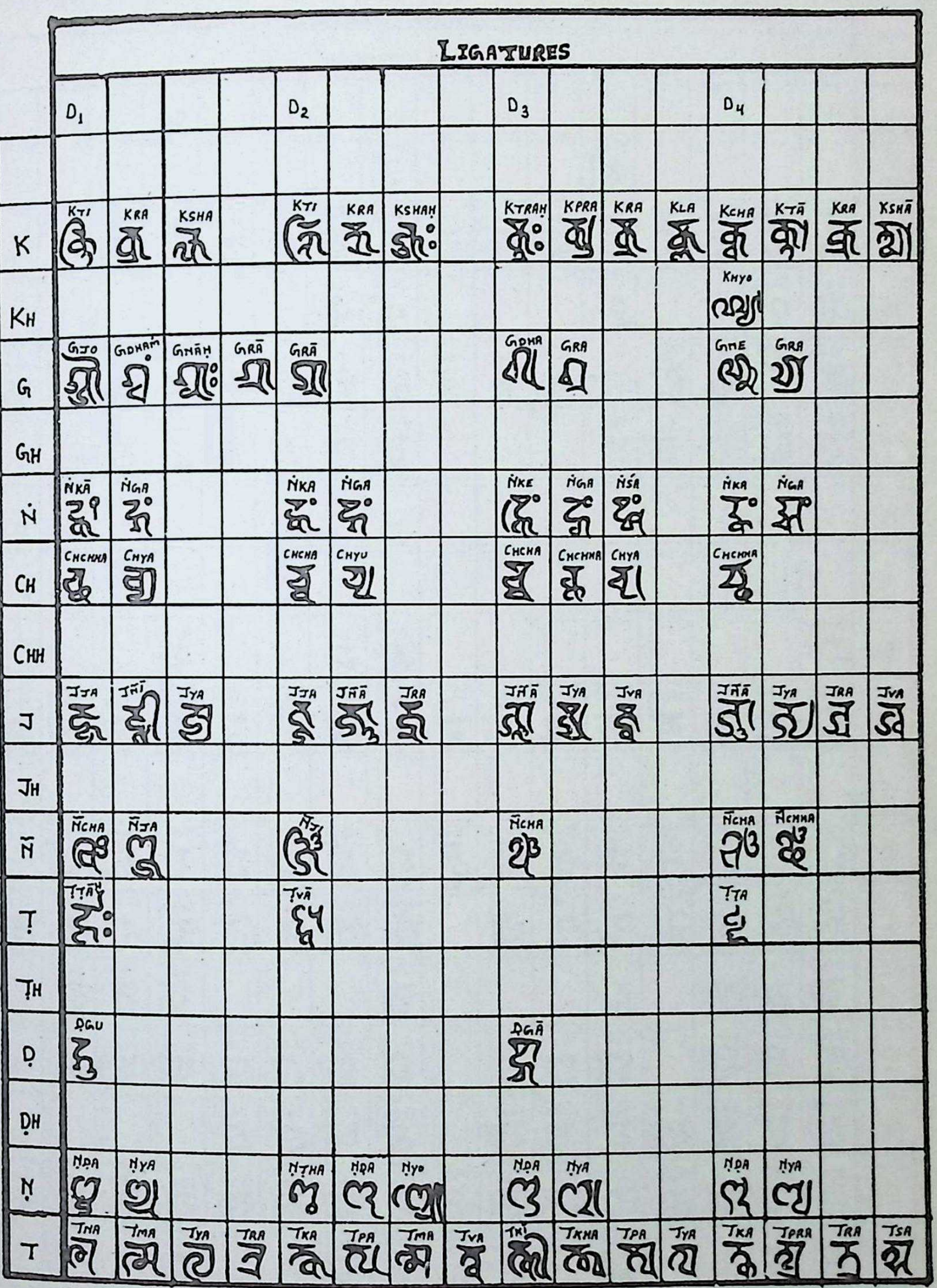
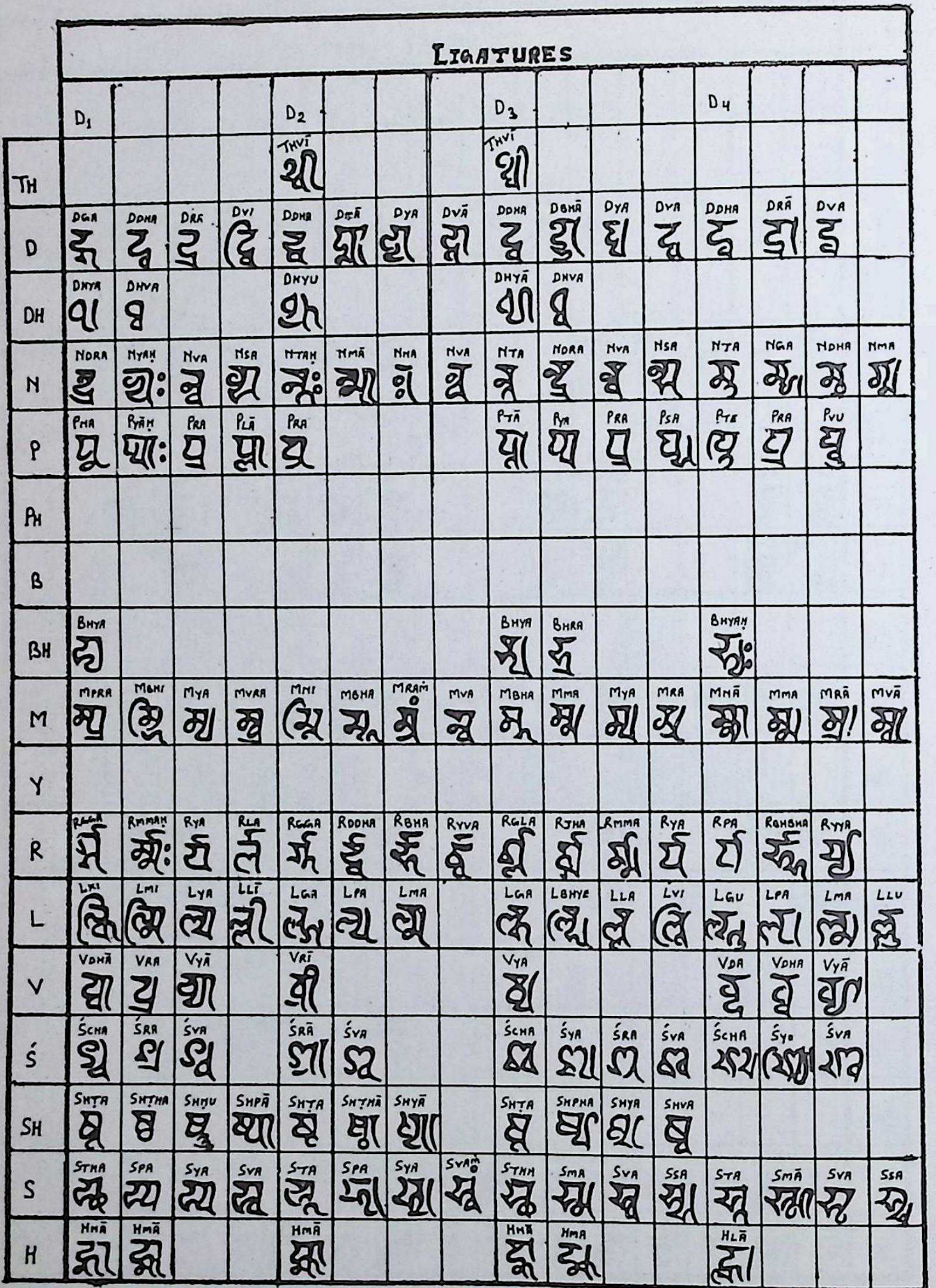


LIGATURES

	D1				D2				D3				D4			
K	KTI	KRA	KSHA		KTI	KRA	KSHAḤ		KTRAḤ	KPRA	KRA	KLA	KCHA	KTĀ	KRA	XSHĀ
KH													KHYO			
G	GJO	GDHAṀ	GNĀḤ	GRĀ	GRĀ				GDHA	GRA			GME	GRA		
GH																
Ṅ	ṄKĀ	ṄGA			ṄKA	ṄGA			ṄKE	ṄGA	ṄŚA		ṄKA	ṄGA		
CH	CHCHHA	CHYA			CHCHA	CHYU			CHCHA	CHCHHA	CHYA		CHCHHA			
CHH																
J	JJA	JÑĪ	JYA		JJA	JÑĀ	JRA		JÑĀ	JYA	JVA		JÑĀ	JYA	JRA	JVA
JH																
Ñ	ÑCHA	ÑJA			ÑJ				ÑCHA				ÑCHA	ÑCHHA		
Ṭ	ṬṬĀ				ṬVĀ								ṬṬA			
ṬH																
Ḍ	ḌGU								ḌGĀ							
ḌH																
Ṇ	ṆḌA	ṆYA			ṆṬHA	ṆḌA	ṆYO		ṆḌA	ṆYA			ṆḌA	ṆYA		
T	TNA	TMA	TYA	TRA	TKA	TPA	TMA	TVA	TKI	TKHA	TPA	TYA	TKA	TPRA	TRA	TSA

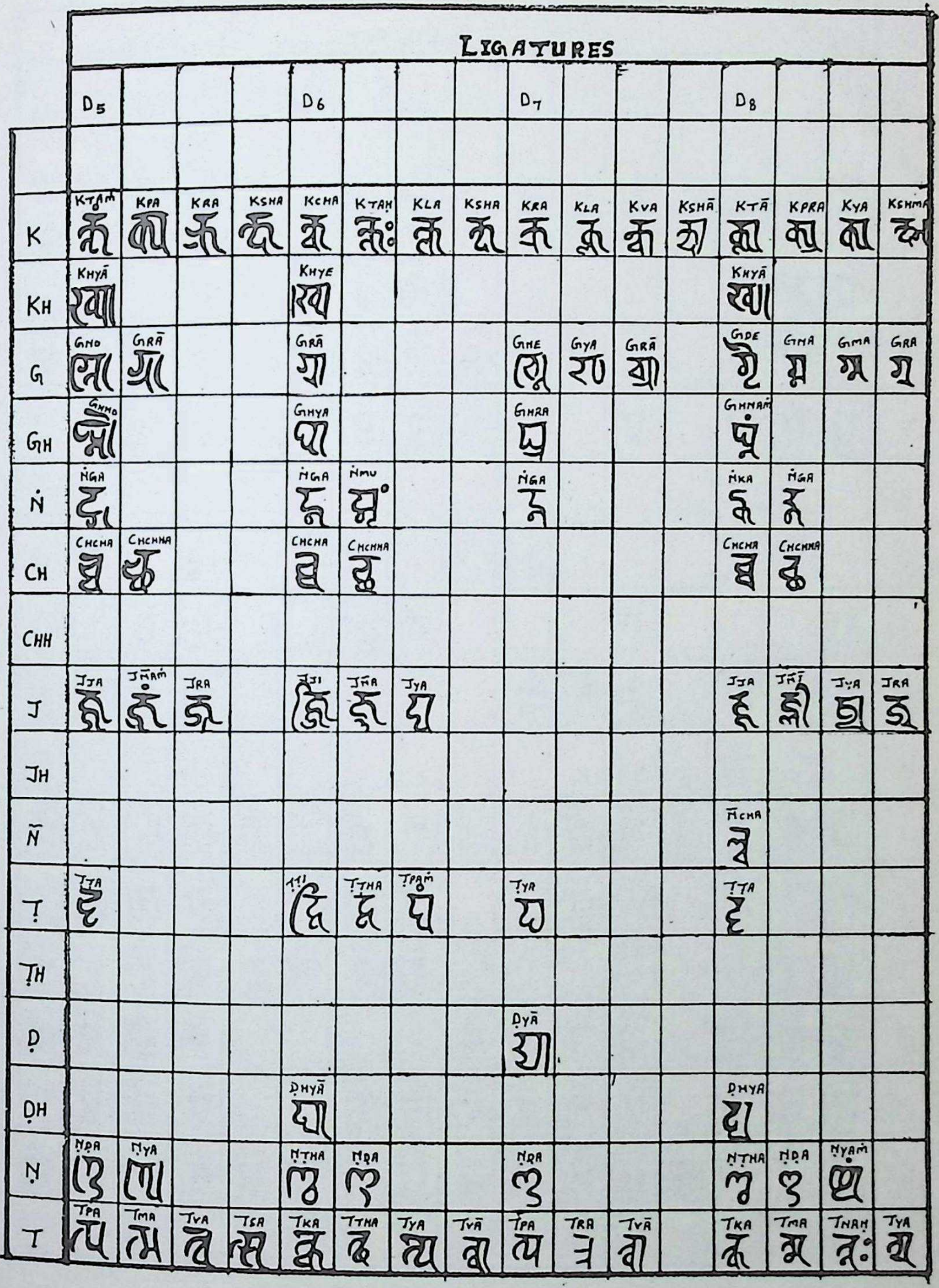
PLATE 114



LIGATURES

	D1				D2				D3				D4			
TH					THVĪ				THVĪ							
D	DGA	DDHA	DRA	DVI	DDHA	DRĀ	DYA	DVĀ	DDHA	DBHA	DYA	DVA	DDHA	DRĀ	DVA	
DH	DHYA	DHVA			DHYU				DHYĀ	DHVA						
N	NDRA	NYAḤ	NVA	NSA	NTAḤ	NMĀ	NNA	NVA	NTA	NDRA	NVA	NSA	NJA	NGA	NDHA	NMA
P	PHA	PYĀḤ	PRA	PLĀ	PRA				PTĀ	PYA	PRA	PSA	PTE	PRA	PVU	
PH																
B																
BH	BHYA								BHYA	BHRA			BHYAḤ			
M	MPRA	MGHI	MYA	MVRA	MNI	MBHA	MRAṂ	MVA	MBHA	MMA	MYA	MRA	MNĀ	MMA	MRĀ	MVĀ
Y																
R	RGGA	RMMAḤ	RYA	RLA	RGGA	RDDHA	RBHA	RYVA	RGLA	RJHA	RMMA	RYA	RPA	RGHBHA	RYYA	
L	LVI	LMI	LYA	LLĪ	LGA	LPA	LMA		LGA	LBHYE	LLA	LVI	LGU	LPA	LMA	LLU
V	VDHĀ	VRA	VYĀ		VRĪ				VYA				VDA	VDHA	VYĀ	
Ś	ŚCHA	ŚRA	ŚVA		ŚRĀ	ŚVA			ŚCHA	ŚYA	ŚRA	ŚVA	ŚCHA	ŚYO	ŚVA	
SH	SHṬA	SHṬHA	SHṆU	SHPĀ	SHṬA	SHṬMĀ	SHYĀ		SHṬA	SHPHA	SHYA	SHVA				
S	STHA	SPA	SYA	SVA	STA	SPA	SYA	SVAṂ	STHA	SMA	SVA	SSA	STA	SMĀ	SVA	SSA
H	HMĀ	HMĀ			HMĀ				HNĀ	HMA			HLĀ			

11th CENTURY A.D. PLATE 115

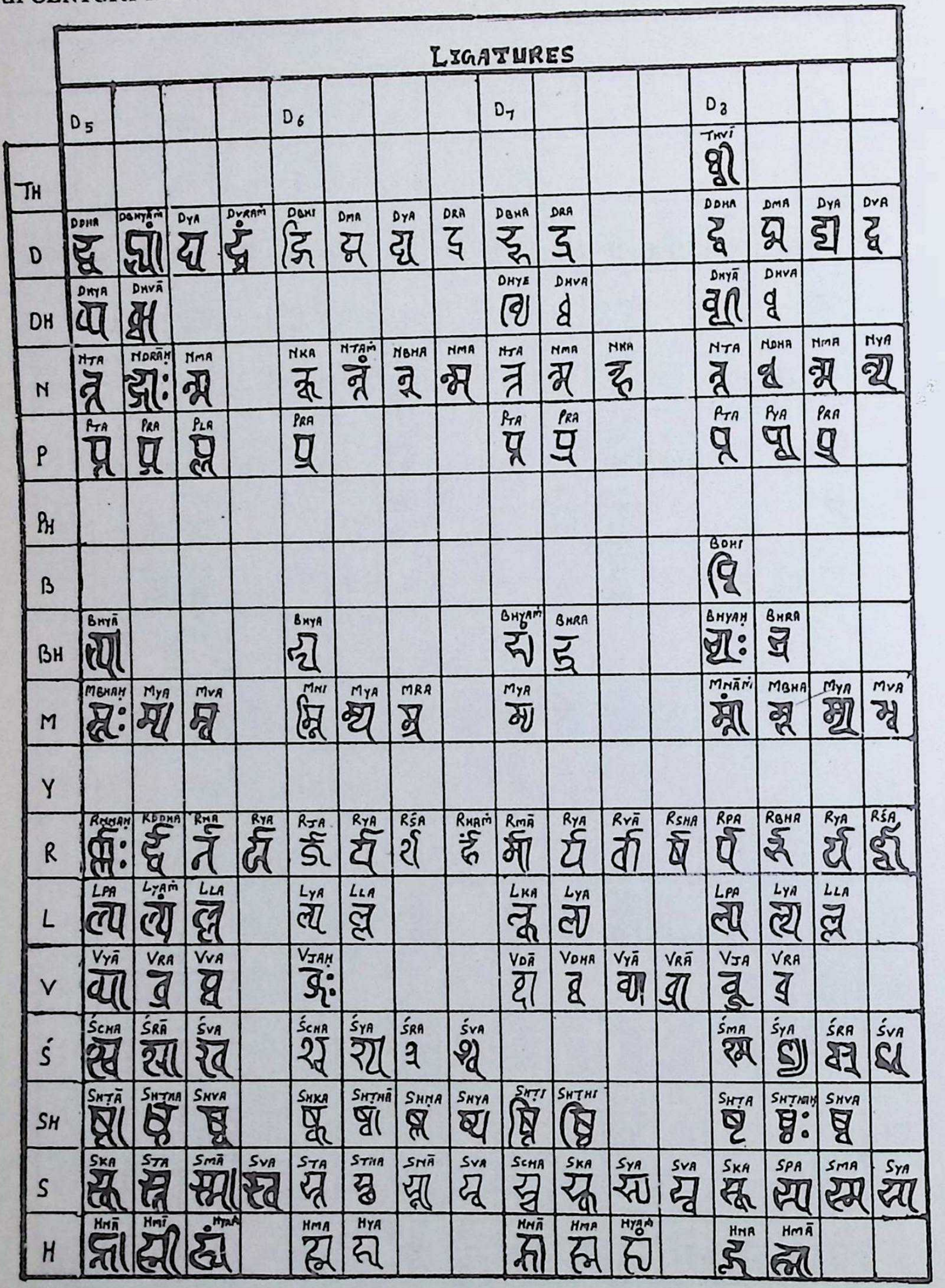


LIGATURES

	D5				D6				D7				D8			
K	KTAṀ	KPA	KRA	KSHA	KCHA	KTAḤ	KLA	KSHA	KRA	KLA	KVA	KSHĀ	KTĀ	KPRA	KYA	KSHMA
KH	KHYĀ				KHYE								KHYĀ			
G	GNO	GRĀ			GRĀ				GNE	GYA	GRĀ		GDE	GMA	GMA	GRA
GH	GHMO				GHYA				GHRA				GHNAṀ			
Ṅ	ṄGA				ṄGA	ṄMU			ṄGA				ṄKA	ṄGA		
CH	CHCHA	CHCHHA			CHCHA	CHCHHA							CHCHA	CHCHHA		
CHH																
J	JJA	JÑAṀ	JRA		JJI	JÑA	JYA						JJA	JÑĪ	JYA	JRA
JH																
Ñ													ÑCHA			
Ṭ	ṬṬA				ṬṬI	ṬṬHA	ṬPAṀ		ṬYA				ṬṬA			
ṬH																
Ḍ									ḌYĀ							
ḌH					ḌHYĀ								ḌHYA			
Ṇ	ṆḌA	ṆYA			ṆṬHA	ṆḌA			ṆḌA				ṆṬHA	ṆḌA	ṆYAṀ	
T	TPA	TMA	TVA	TSA	TKA	TTHA	TYA	TVĀ	TPA	TRA	TVĀ		TKA	TMA	TNAḤ	TYA

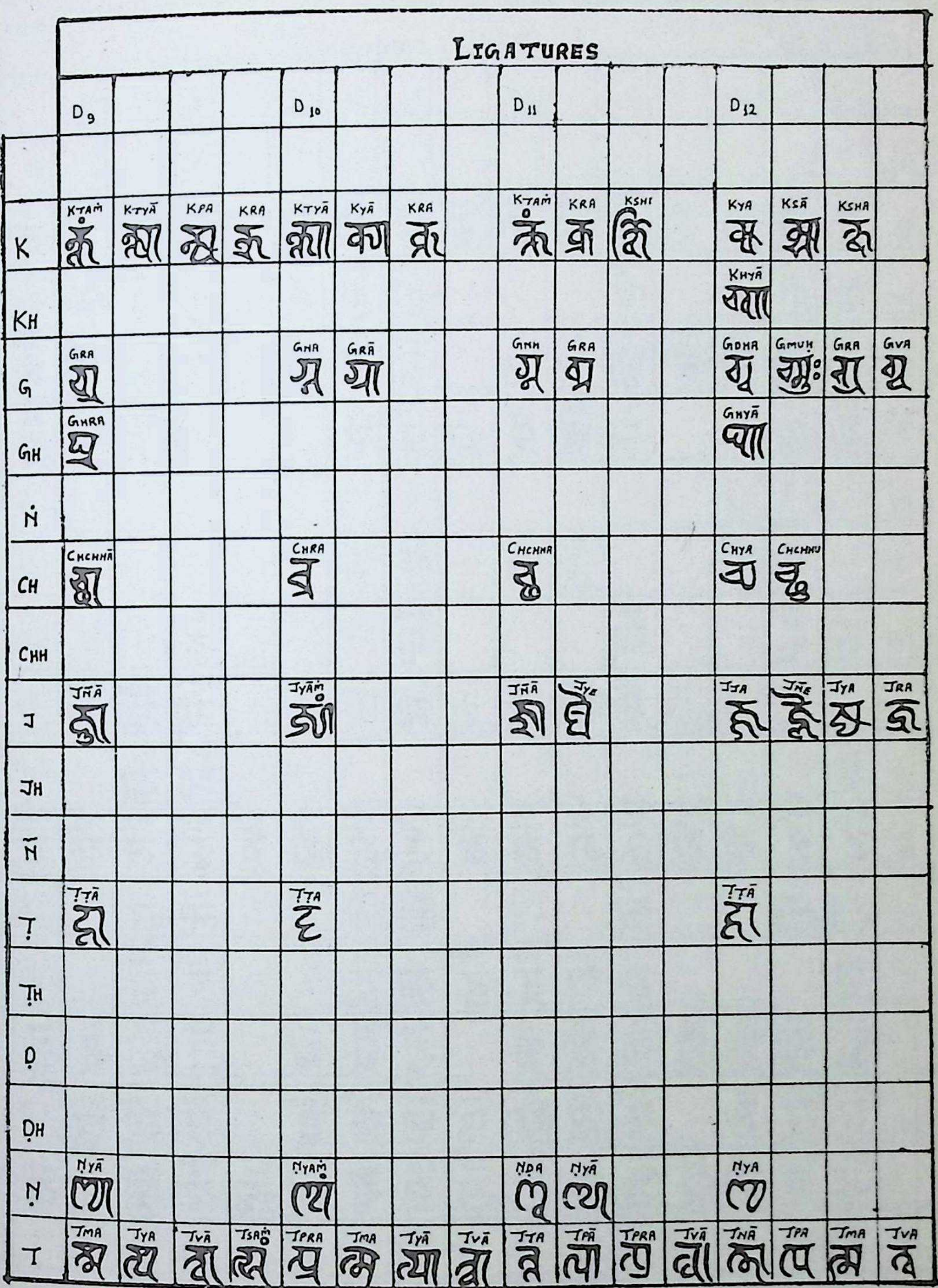
PLATE 116

11th CENTURY A.D.



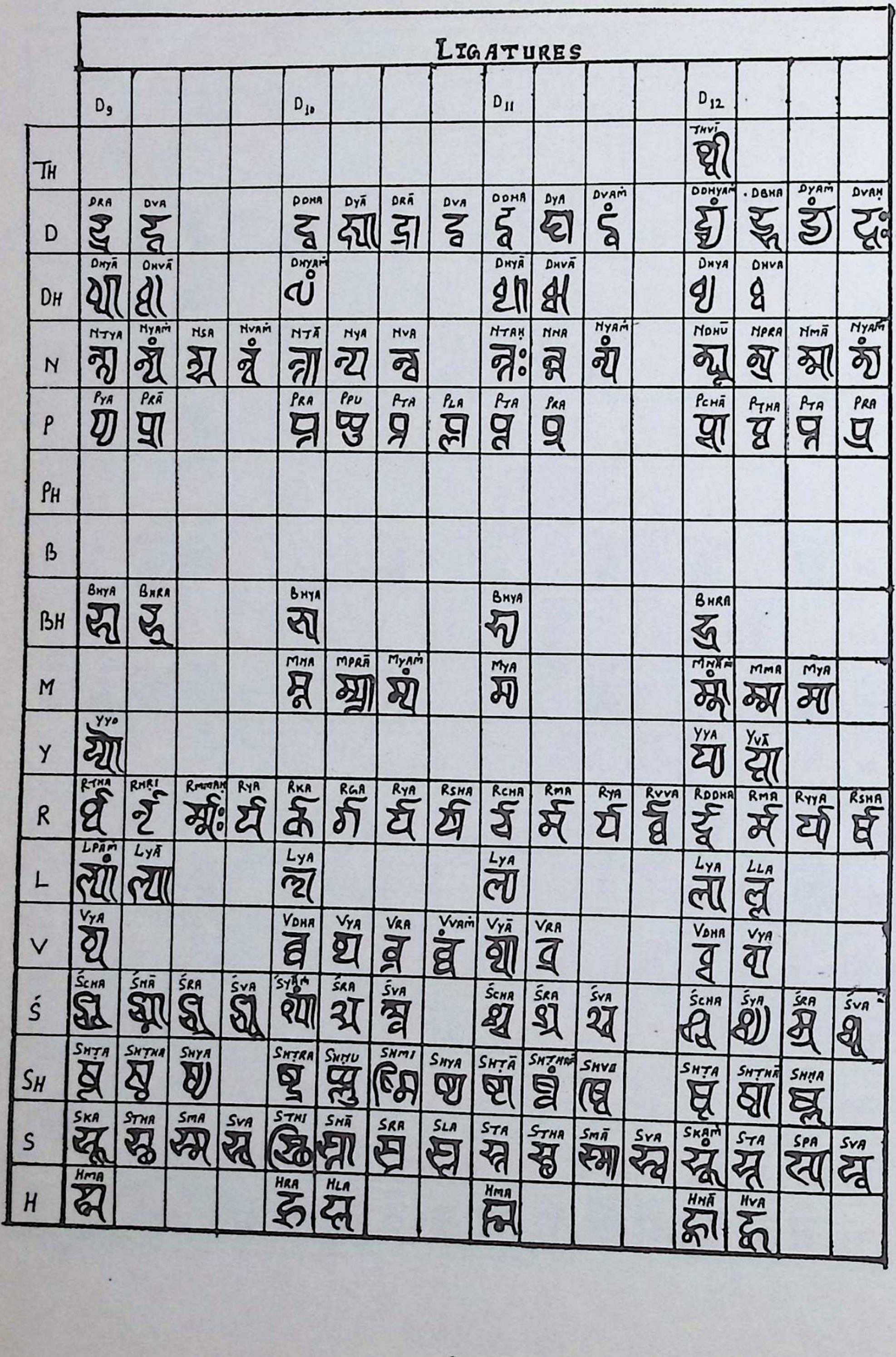
LIGATURES

	D5				D6				D7				D8			
TH													THVĪ			
D	DDHA	DDHYĀṀ	DYA	DVRAṀ	DDHI	DMA	DYA	DRA	DBHA	DRA			DDHA	DMA	DYA	DVA
DH	DHYA	DHVĀ							DHYE	DHVA			DHYĀ	DHVA		
N	NTA	NDRĀḤ	NMA		NKA	NTAṀ	NBHA	NMA	NTA	NMA	NKA		NTA	NDHA	NMA	NYA
P	PTA	PRA	PLA		PRA				PTA	PRA			PTA	PYA	PRA	
PH																
B													BDHI			
BH	BHYĀ				BHYA				BHYAṀ	BHRA			BHYAḤ	BHRA		
M	MBHAḤ	MYA	MVA		MNI	MYA	MRA		MYA				MNĀṀ	MBHA	MYA	MVA
Y																
R	RMMAḤ	RDDHA	RNA	RYA	RJA	RYA	RŚA	RHAṀ	RMĀ	RYA	RVĀ	RSHA	RPA	RBHA	RYA	RŚA
L	LPA	LYAṀ	LLA		LYA	LLA			LKA	LYA			LPA	LYA	LLA	
V	VYĀ	VRA	VVA		VJAḤ				VDĀ	VDHA	VYĀ	VRĀ	VJA	VRA		
Ś	ŚCHA	ŚRĀ	ŚVA		ŚCHA	ŚYA	ŚRA	ŚVA					ŚMA	ŚYA	ŚRA	ŚVA
SH	SHṬĀ	SHṬHA	SHVA		SHKA	SHṬHĀ	SHṆA	SHYA	SHṬI	SHṬHI			SHṬA	SHṬHAḤ	SHVA	
S	SKA	STA	SMĀ	SVA	STA	STHA	SNĀ	SVA	SCHA	SKA	SYA	SVA	SKA	SPA	SMA	SYA
H	HMĀ	HMĪ	HYAṀ		HMA	HYA			HMĀ	HMA	HYAṀ		HNA	HMĀ		



LIGATURES

	D₉				D₁₀				D₁₁				D₁₂			
K	KTAṀ	KTYĀ	KPA	KRA	KTYĀ	KYĀ	KRA		KTAṀ	KRA	KSHI		KYA	KSĀ	KSHA	
KH													KHYĀ			
G	GRA				GNA	GRĀ			GNA	GRA			GDHA	GMUḤ	GRA	GVA
GH	GHRA												GHYĀ			
Ṅ																
CH	CHCHHĀ				CHRA				CHCHHA				CHYA	CHCHHU		
CHH																
J	JÑĀ				JYĀṀ				JÑĀ	JYE			JJA	JÑE	JYA	JRA
JH																
Ñ																
Ṭ	ṬṬĀ				ṬṬA								ṬṬĀ			
ṬH																
Ḍ																
ḌH																
Ṇ	ṆYĀ				ṆYAṀ				ṆḌA	ṆYĀ			ṆYA			
T	TMA	TYA	TVĀ	TSAṀ	TPRA	TMA	TYĀ	TVĀ	TTA	TPĀ	TPRA	TVĀ	TNĀ	TPA	TMA	TVA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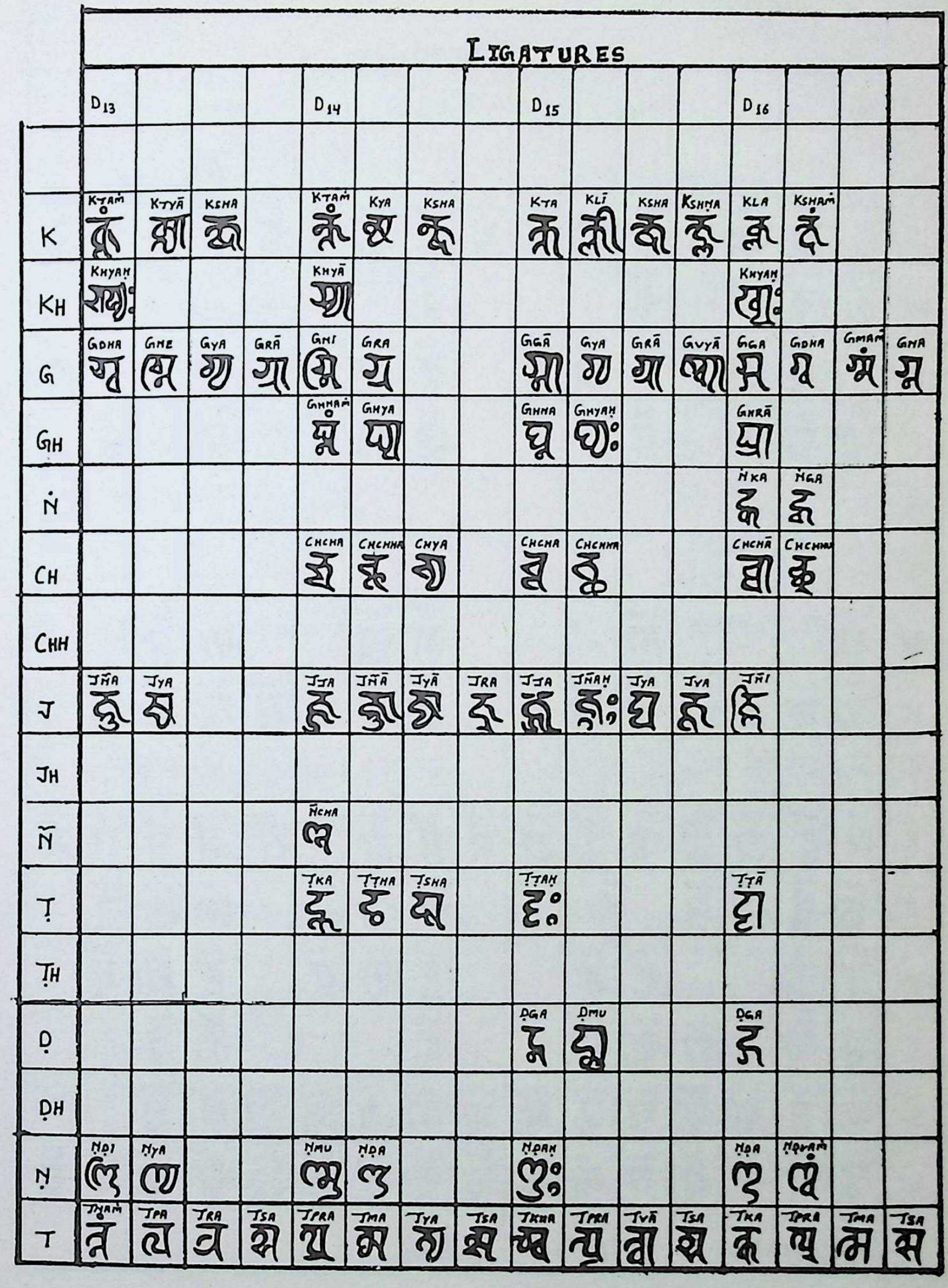
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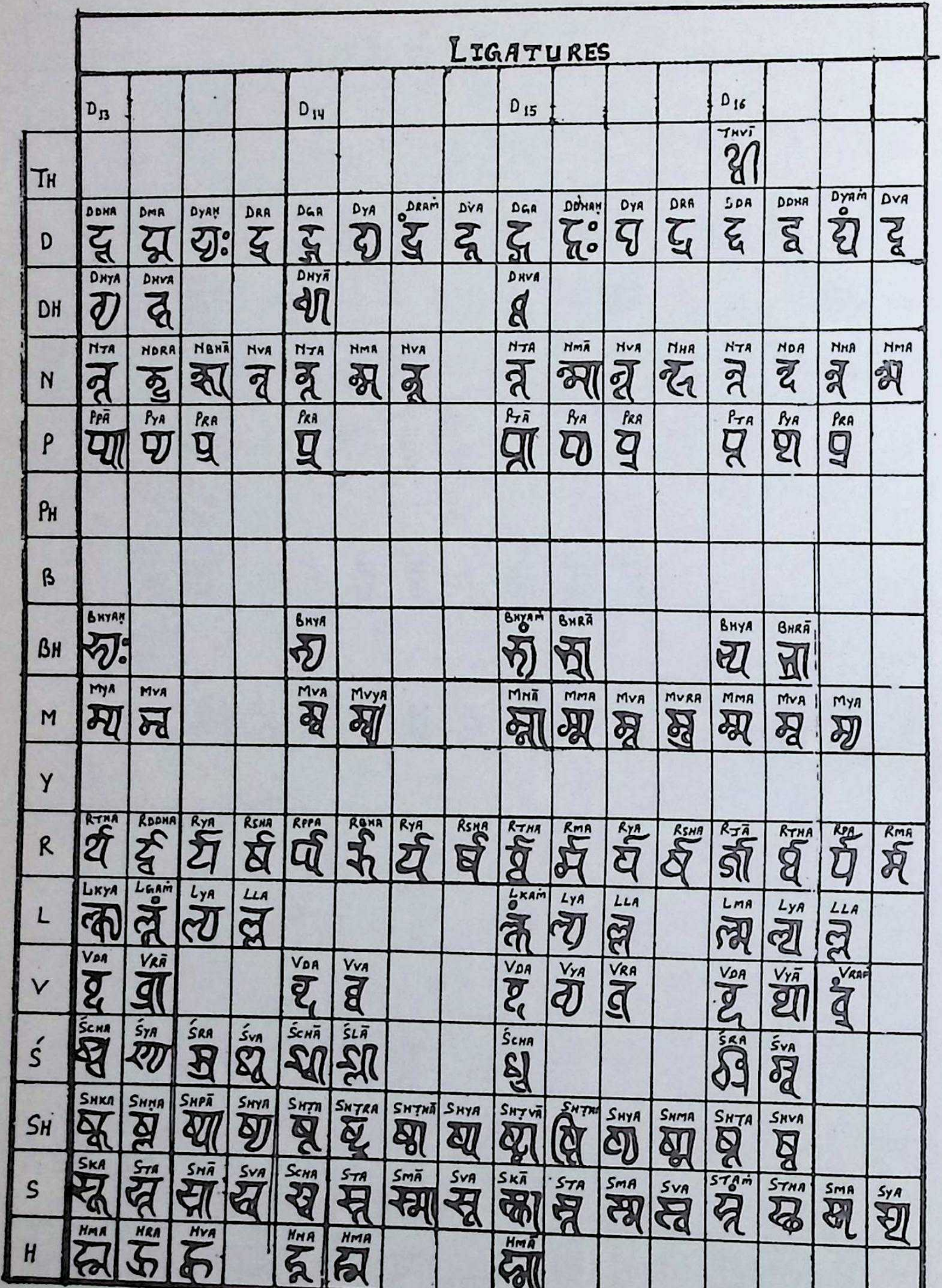

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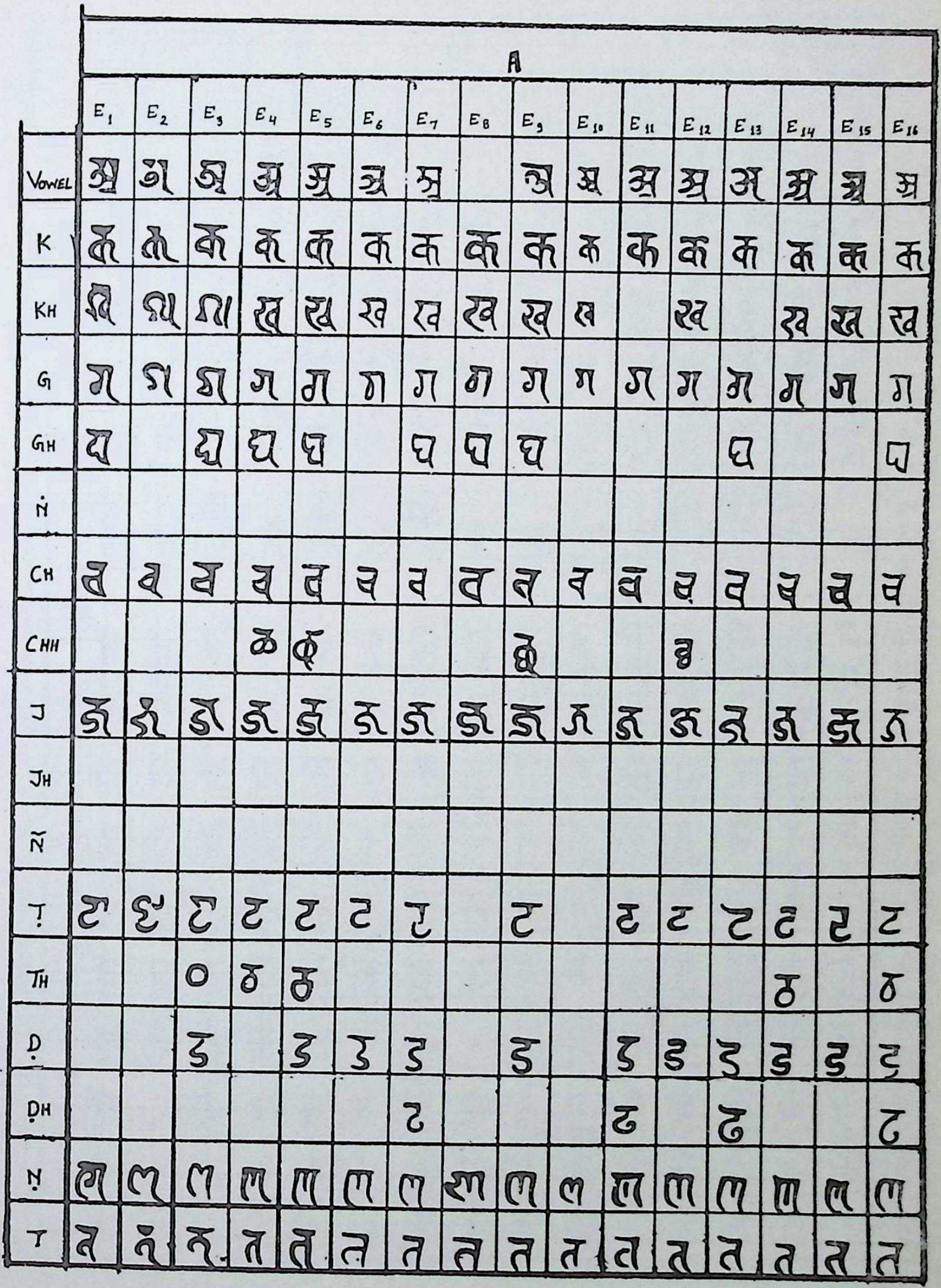
References for Plates 121-150
(12th Century)

Table	Inscription	Date in A.D.	Reference
E_1	Bodh-Gayā inscription of Jayachchandra	119X	*IHQ,* V, Pl. f. p., 17.
E_2	Khonāmukh plates of Dharmapāla	—	*KŚ*, Pls. f. p., 118 & b. pp. 122-23.
E_3	Bhuvaneśvar inscription of Svapneśvara	—	*EI*, VI, Pl. f. p., 202.
E_4	Kumauli plate of Govindachandra	1126	*EI*, IV, Pl. f. p., 100.
E_5	Mahobā plates of Parmardi	1173	*EI,* XVI, Pl. f. p., 12.
E_6	Sarakho Plates of Ratnadeva	1128	*CII*, IV, Pl. LXVII.
E_7	Māllār inscription of Jājalla	1167	*CII*, IV, Pl. LXXIX.
E_8	Sihāwā inscription of Karṇa	1192	*EI,* IX, Pl. f. p., 186.
E_9	Bhopāl plates of Udayavarmā	1199	*IA,* XVI, Pls. b. pp. 256-57.
E_{10}	Pāldī inscription of Arisiṁha	1116	*EI*, XXX, Pl. f. p., 10.
E_{11}	Nāḍol inscription of Kīrtipāla	1161	*IA,* XL, Pls. b. pp. 144-45.
E_{12}	Verāval inscription of Bhīma II	—	*EI*, XXXIII, Pl. f. p., 120.
E_{13}	Kolhāpur plates of Gaṇḍarāditya	1126	*CII*, VI, Pls. C-CI.

E_{14}	Kolhāpur inscription of Bhoja II	1190-93	*CII,* VI, Pl. CXIII.
E_{15}	Asoge plates of Jayakeśi II	1133	*EI,* XXVI, Pls. b. pp. 308-09.
E_{16}	Nīlaguṇḍ plates of Vikramāditya VI	1087 & 1123	*EI,* XII, Pls. b. pp. 152-53.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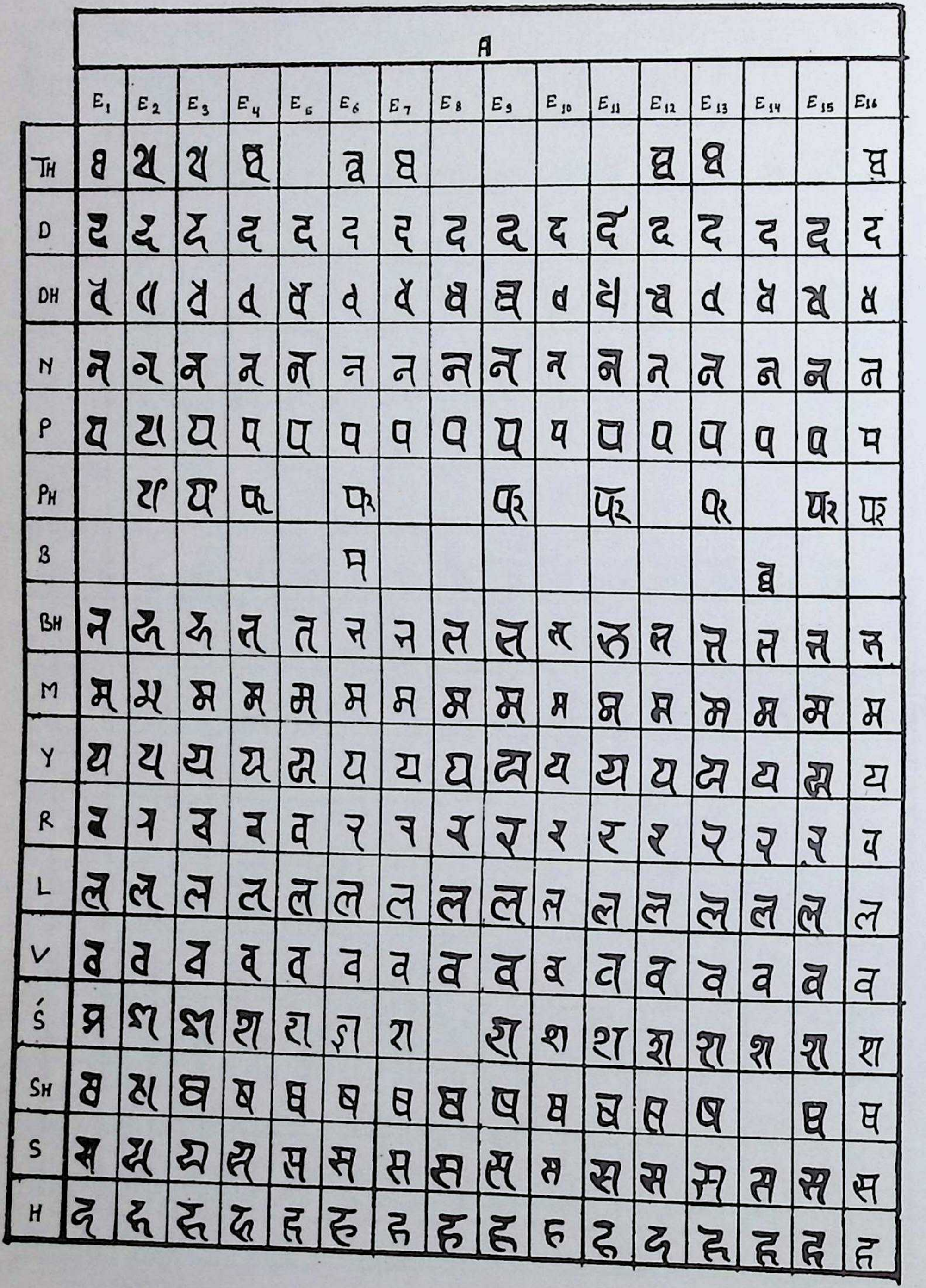
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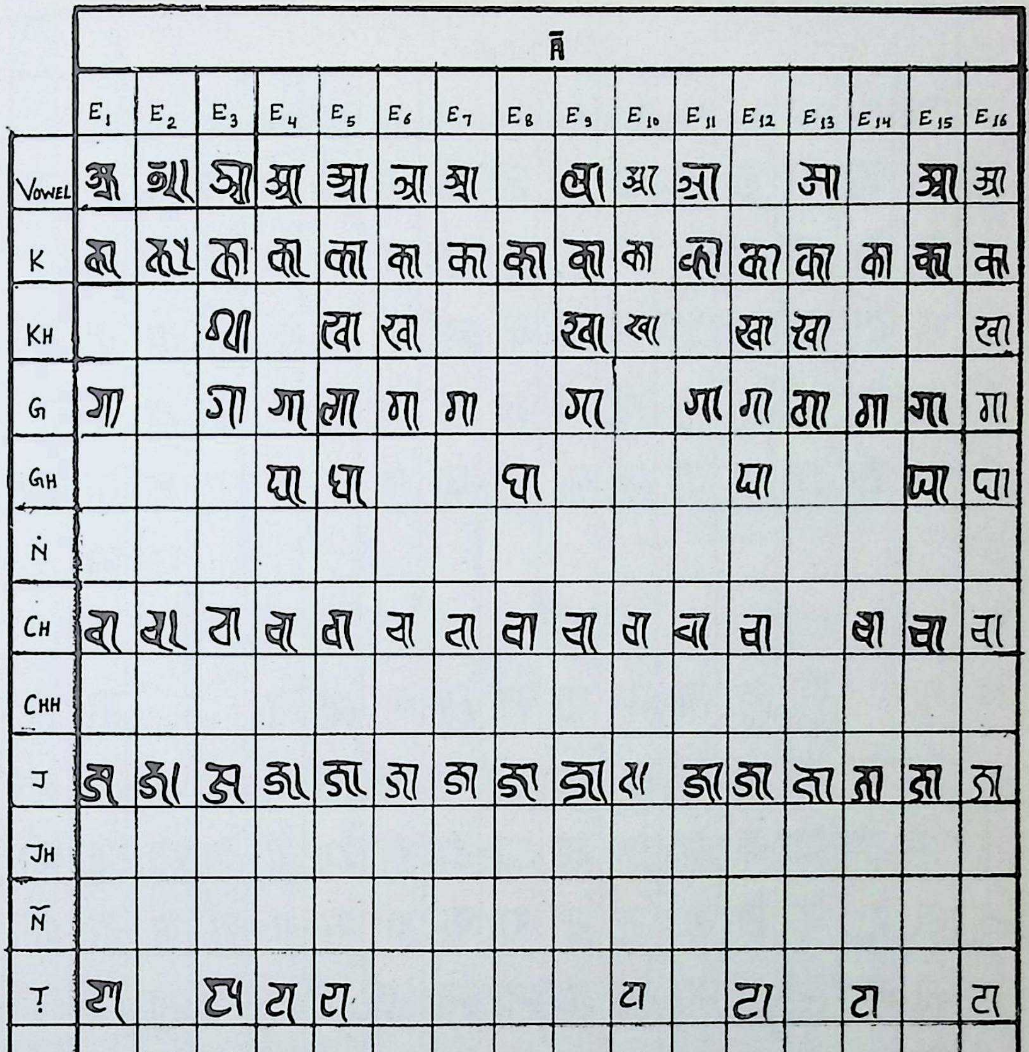
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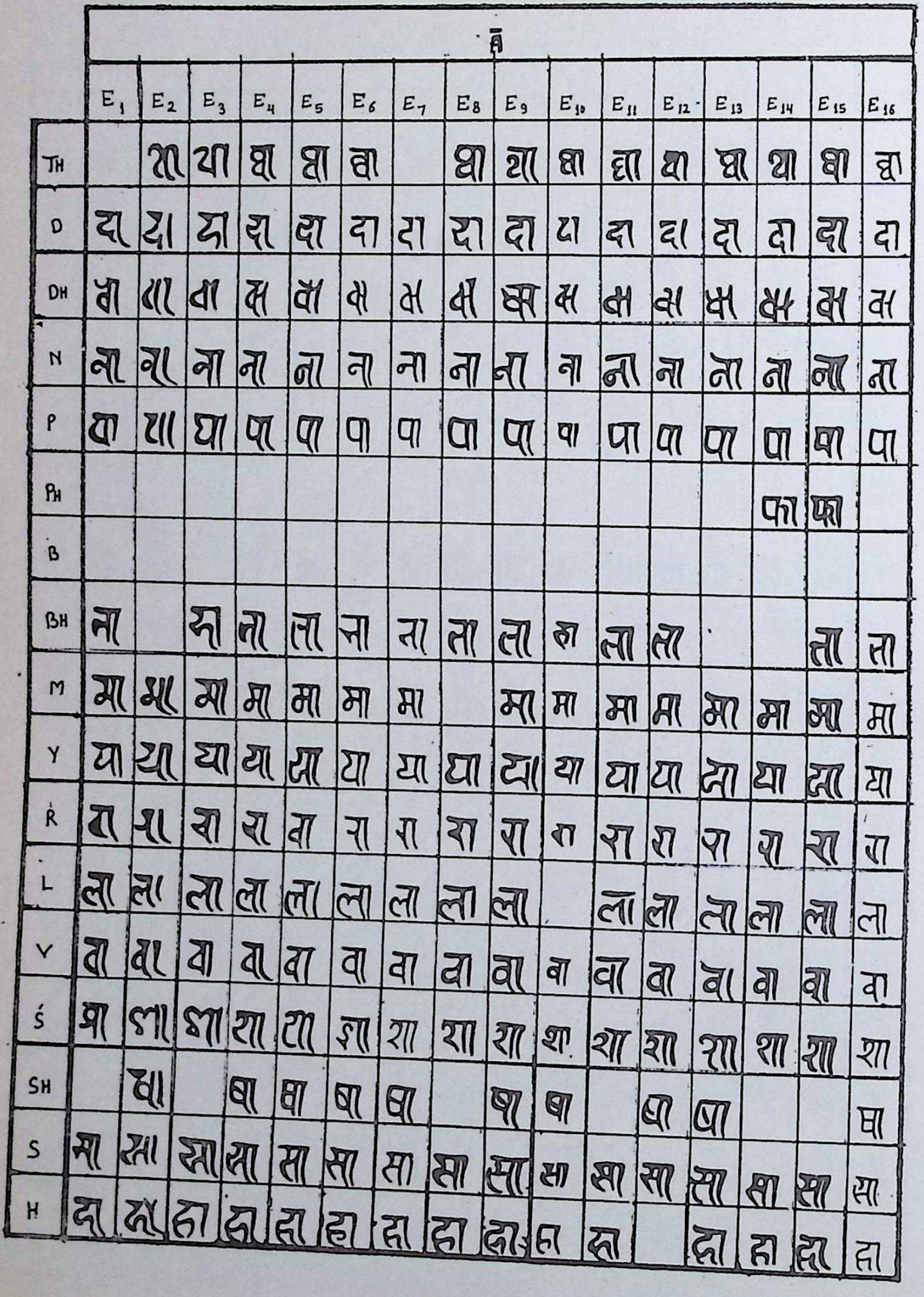
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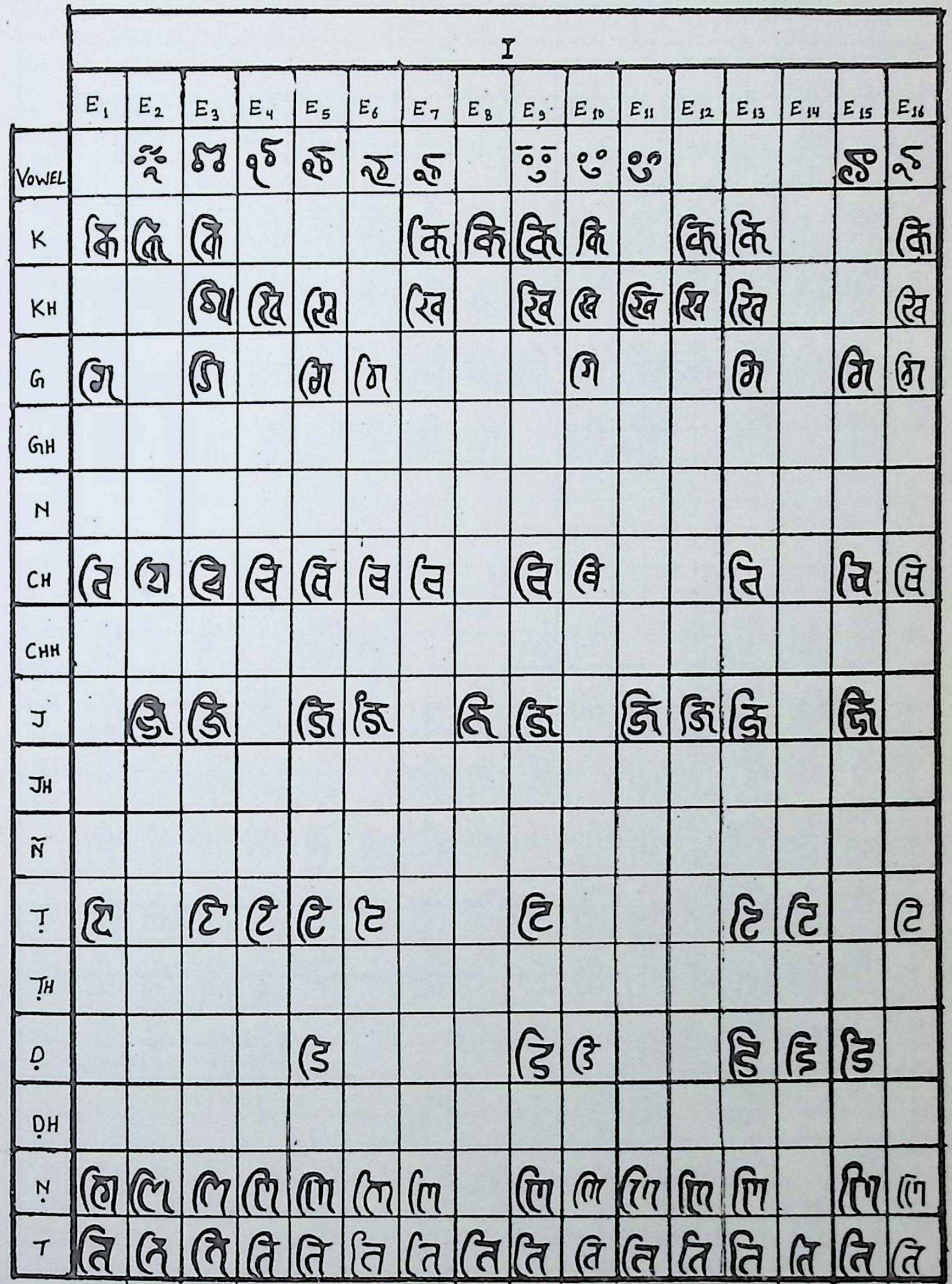
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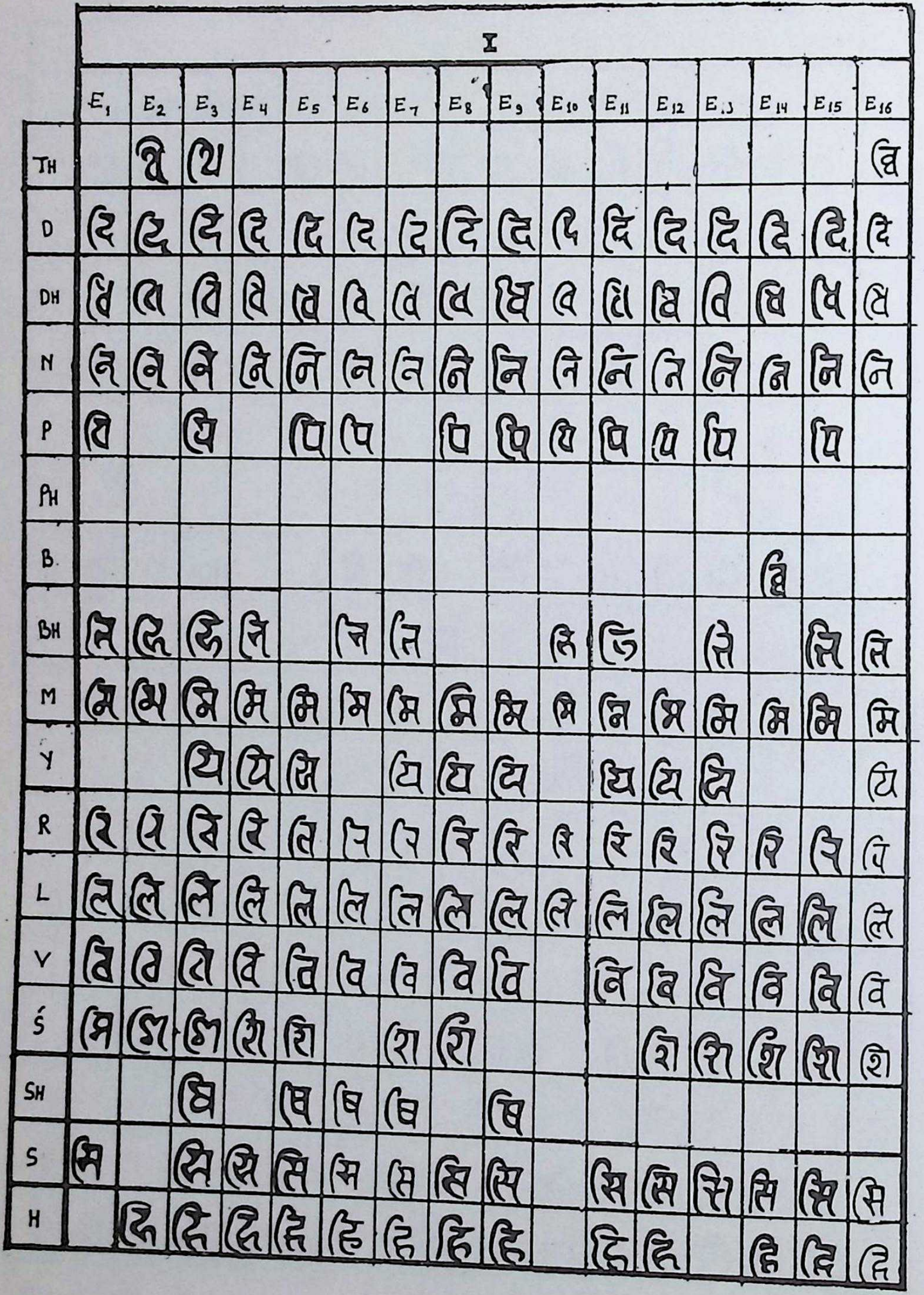
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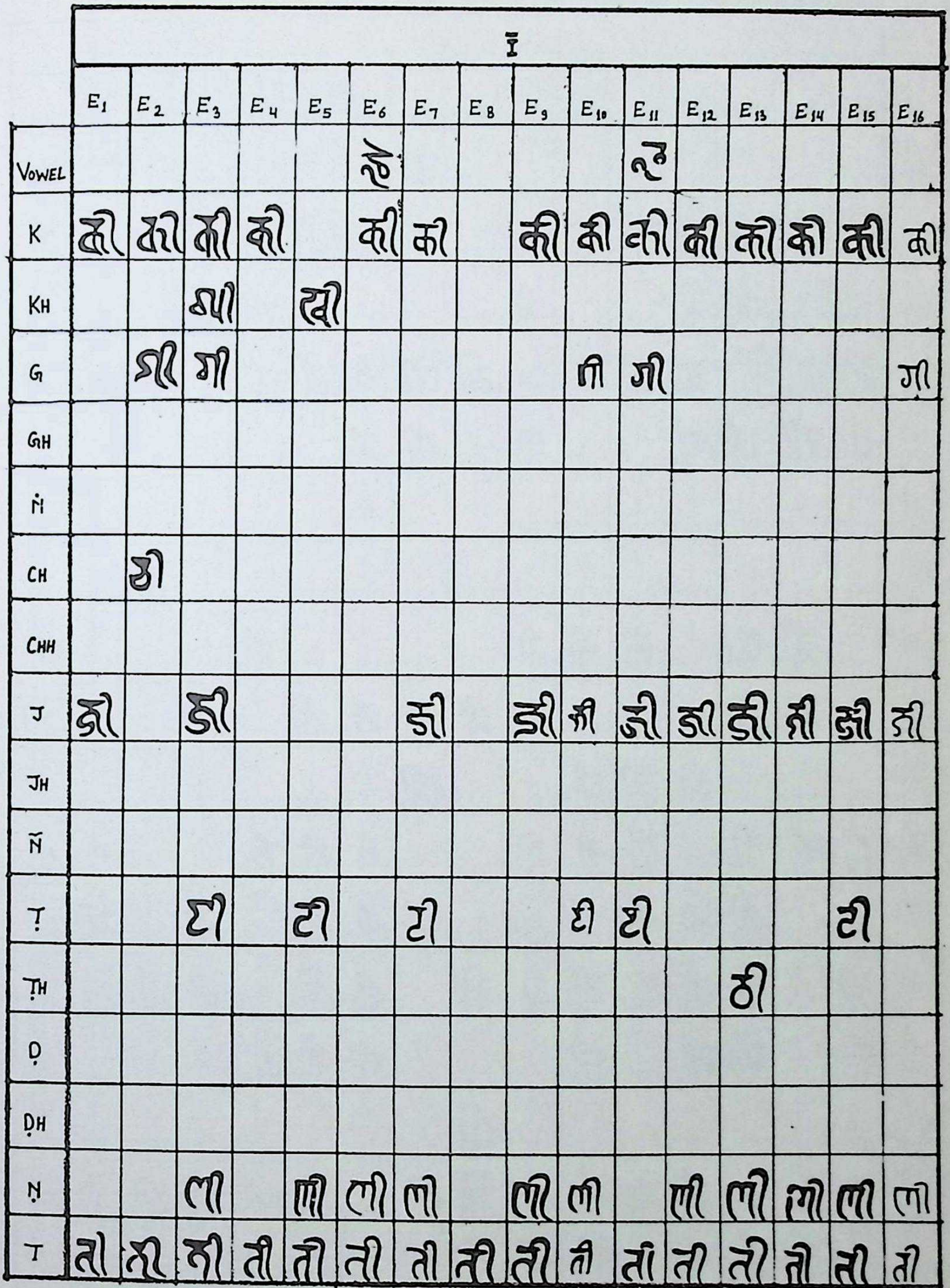
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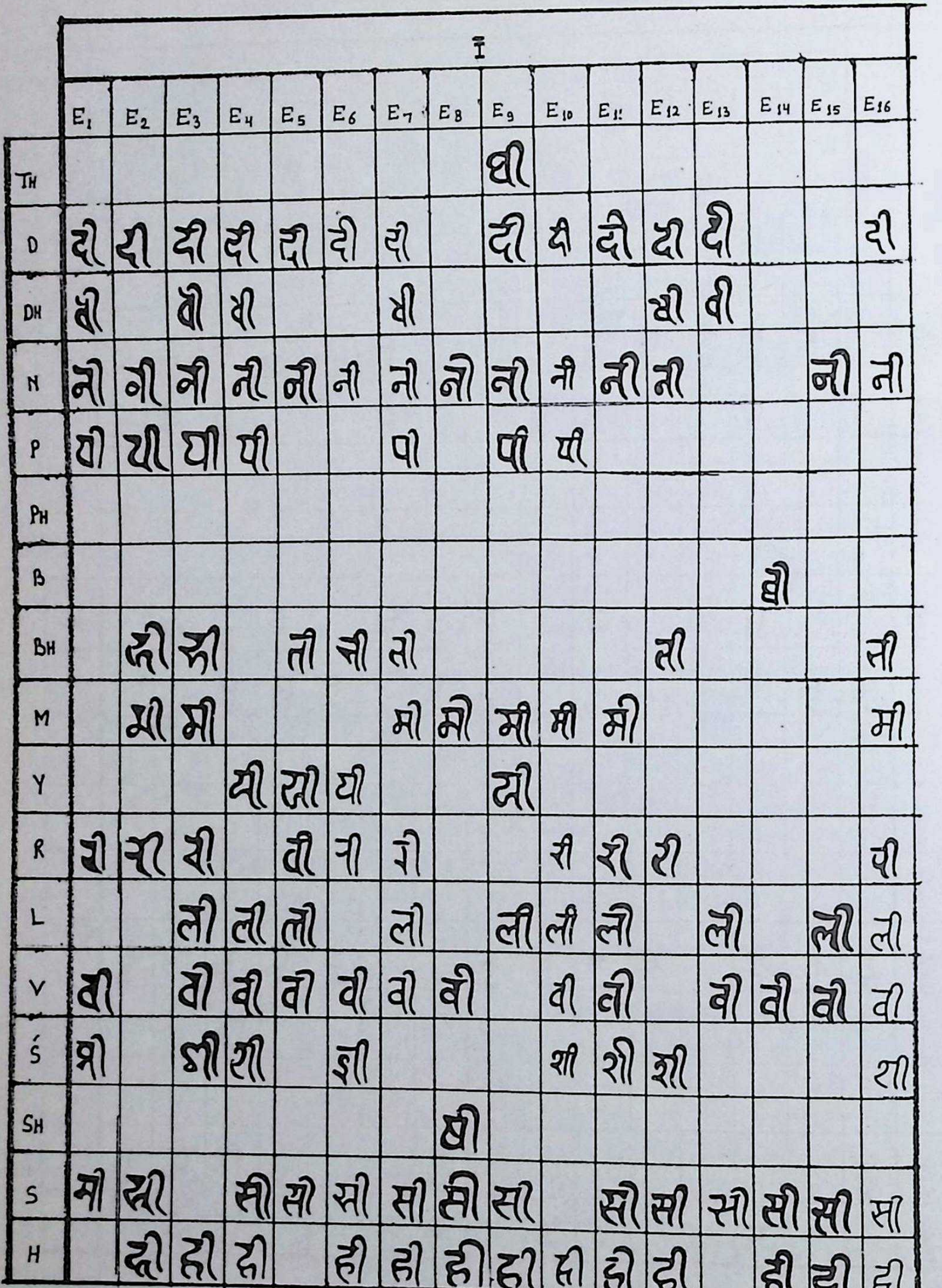
PLATE 128



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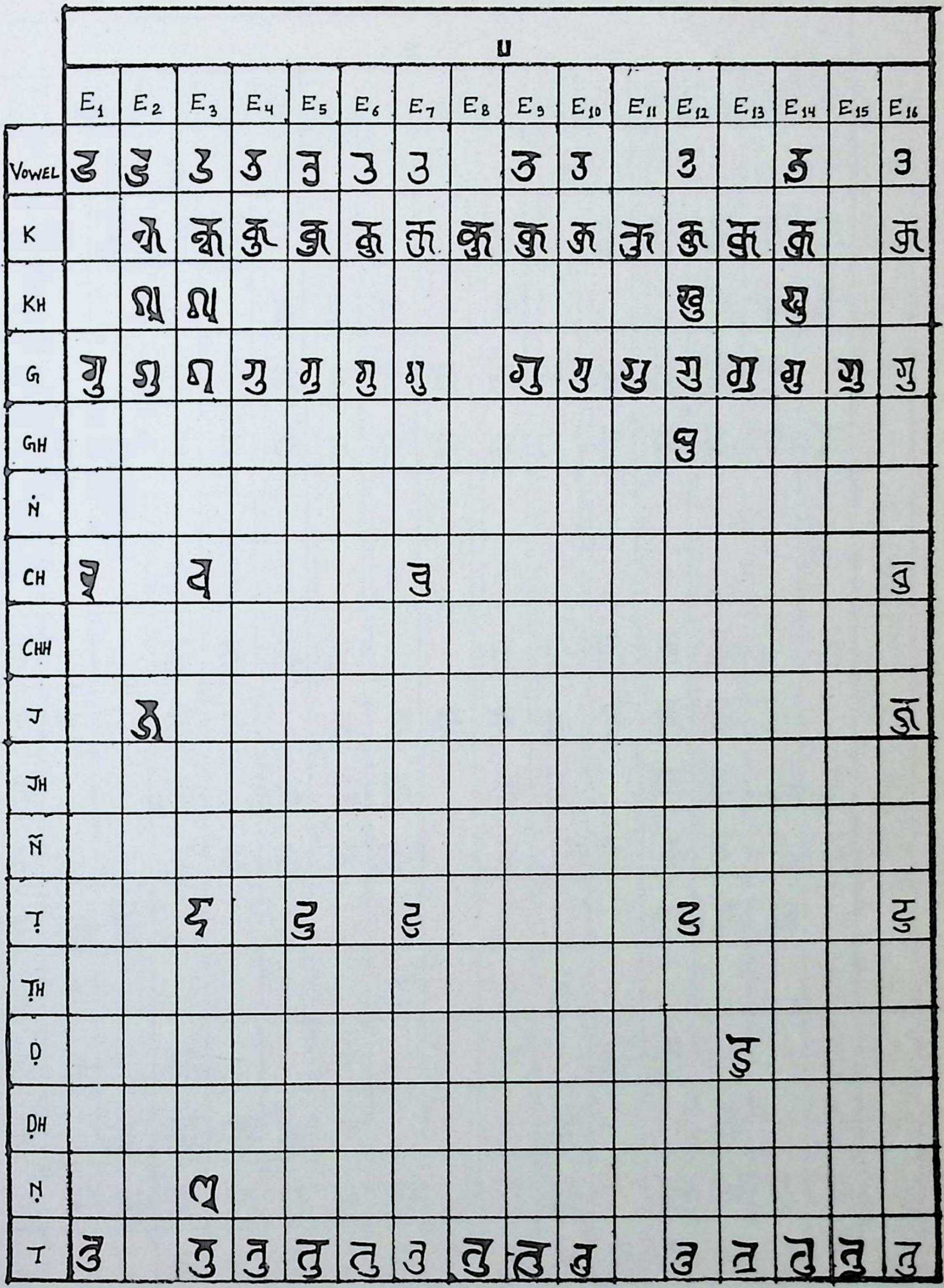
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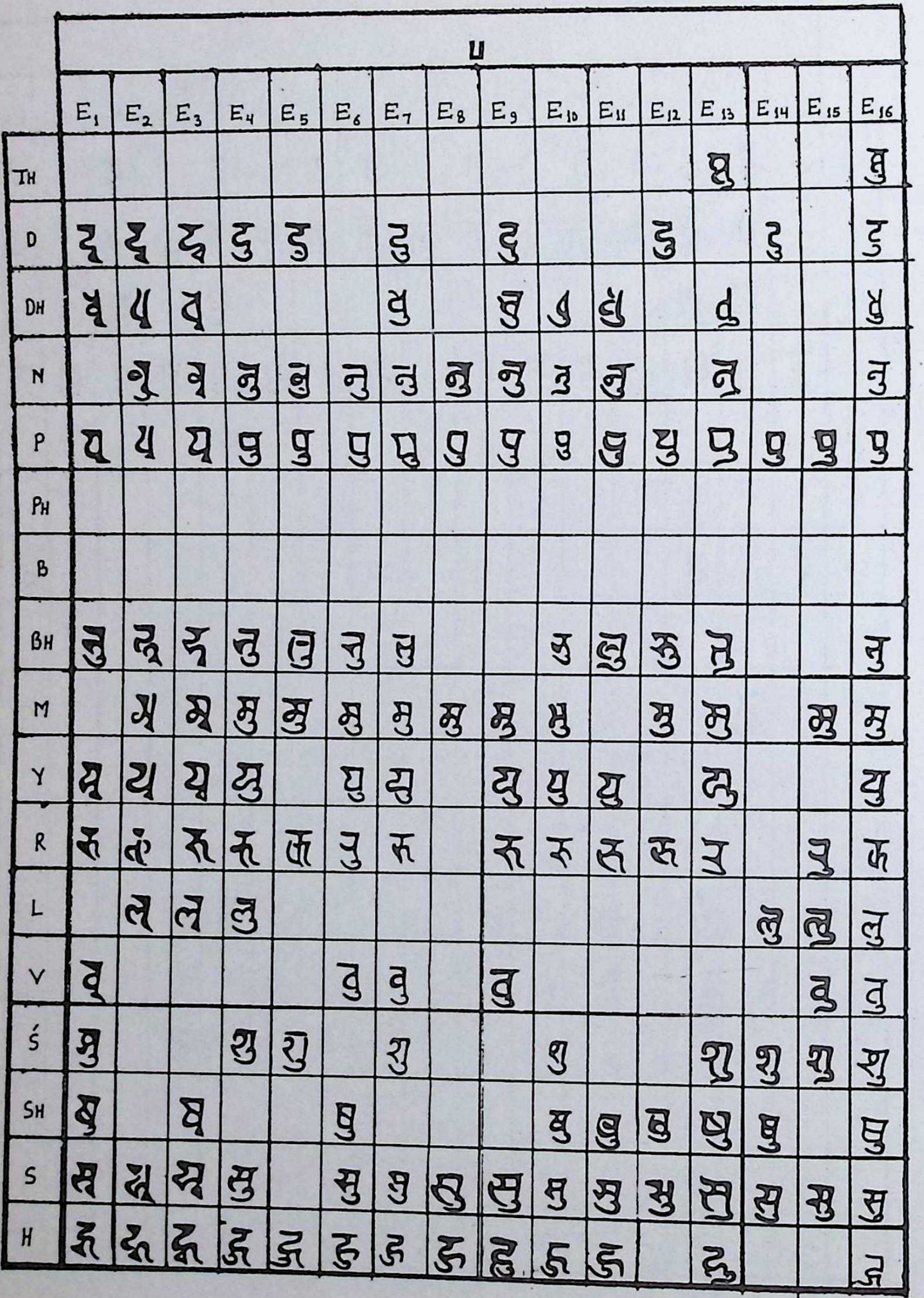
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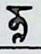
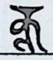
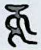
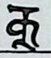
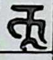
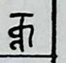
VOWEL																
K																
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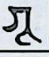
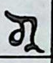
G																
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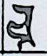
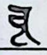
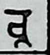
CH																
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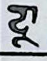
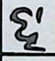
Ṭ																
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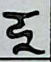
Ḍ																
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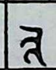
T																

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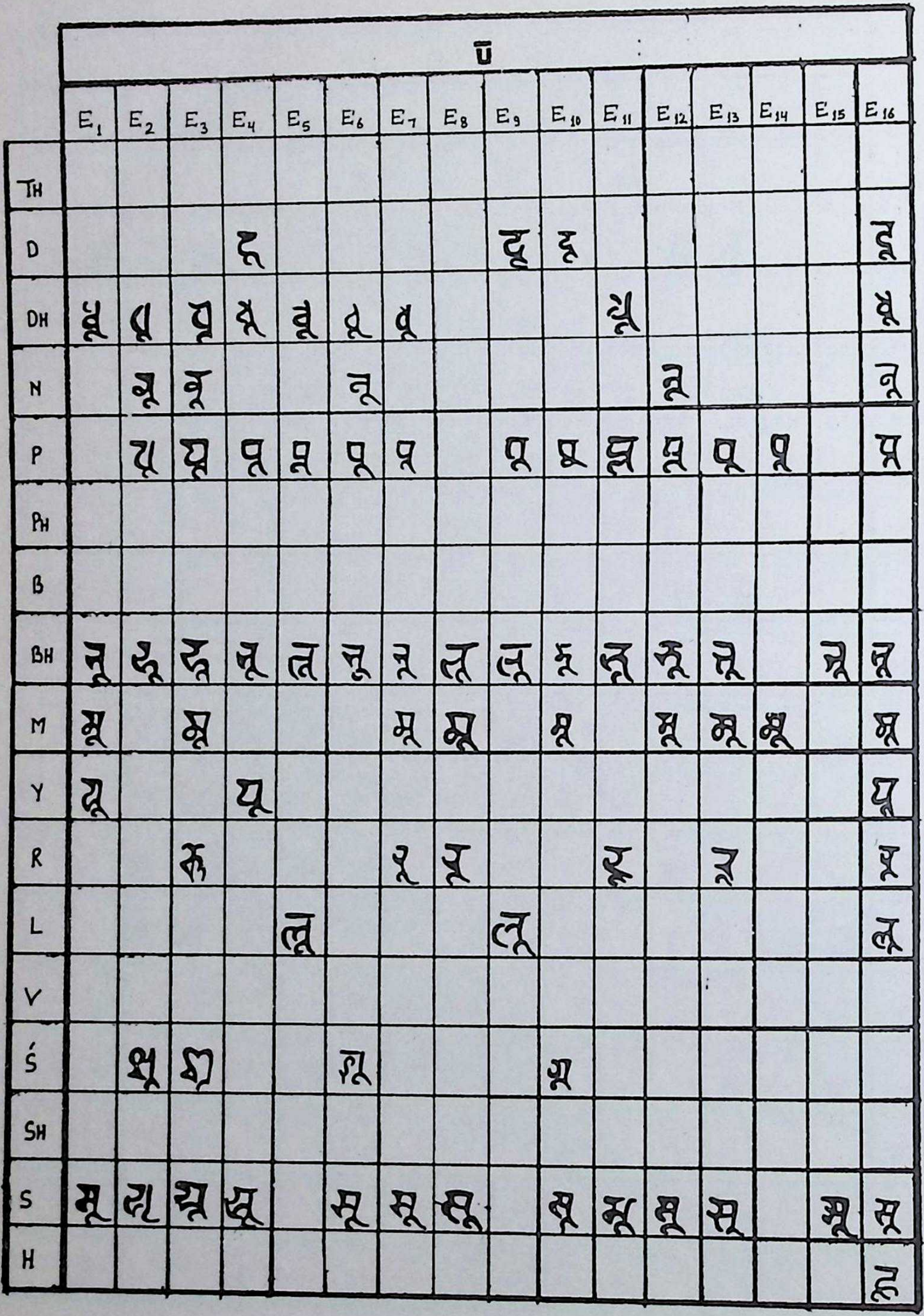
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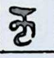
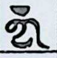
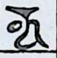
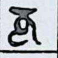
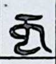
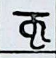
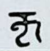
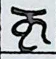
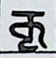
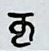
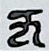
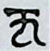
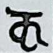
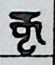
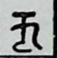
K																
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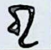
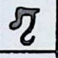
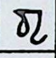
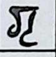
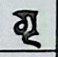
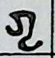
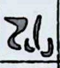
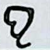
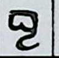
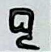
G																
GH																
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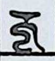
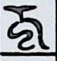
J																
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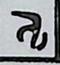
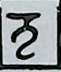
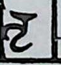
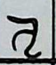
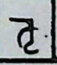
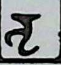
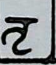
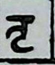
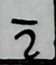
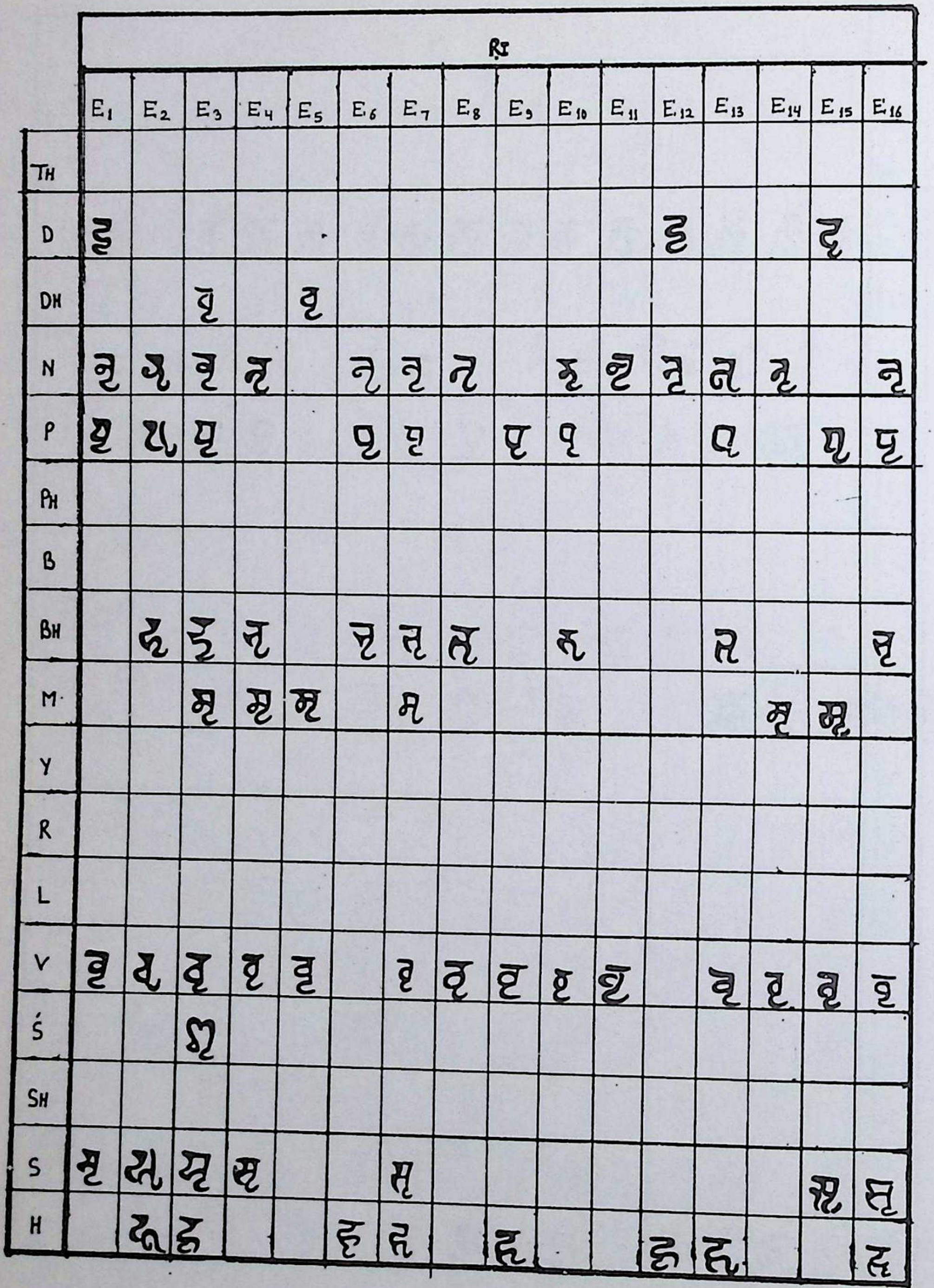
T																



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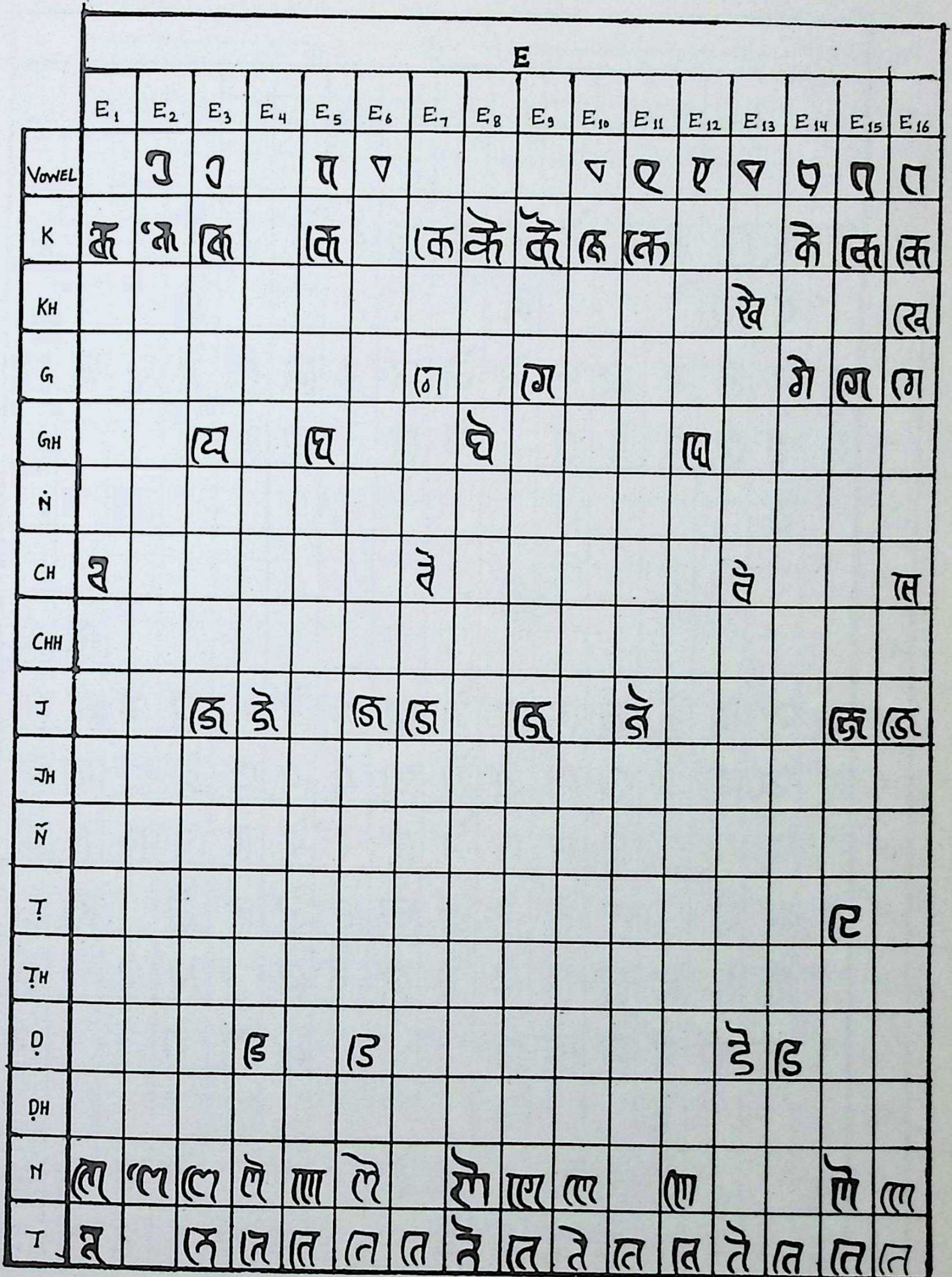
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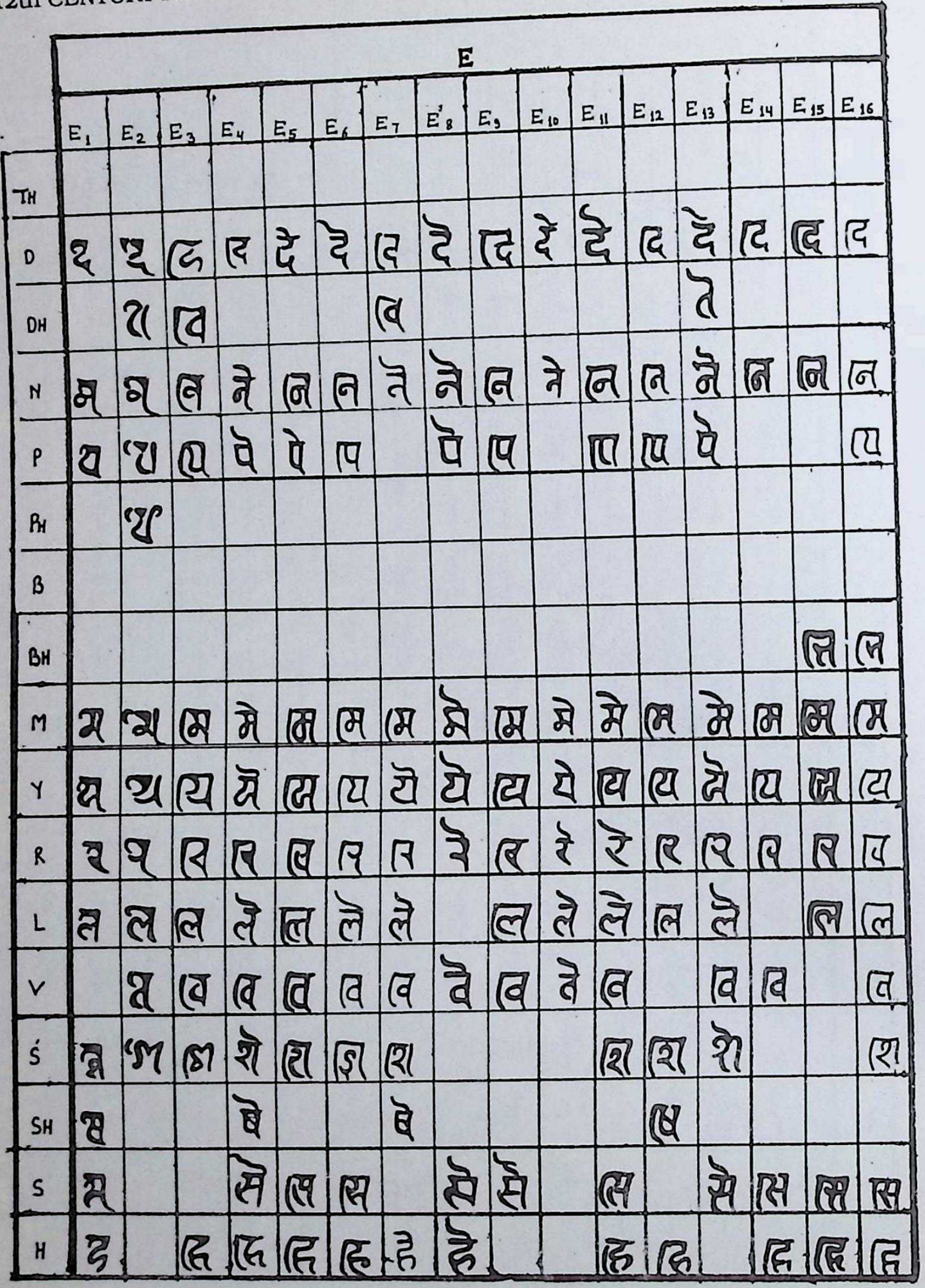
12th CENTURY A.D.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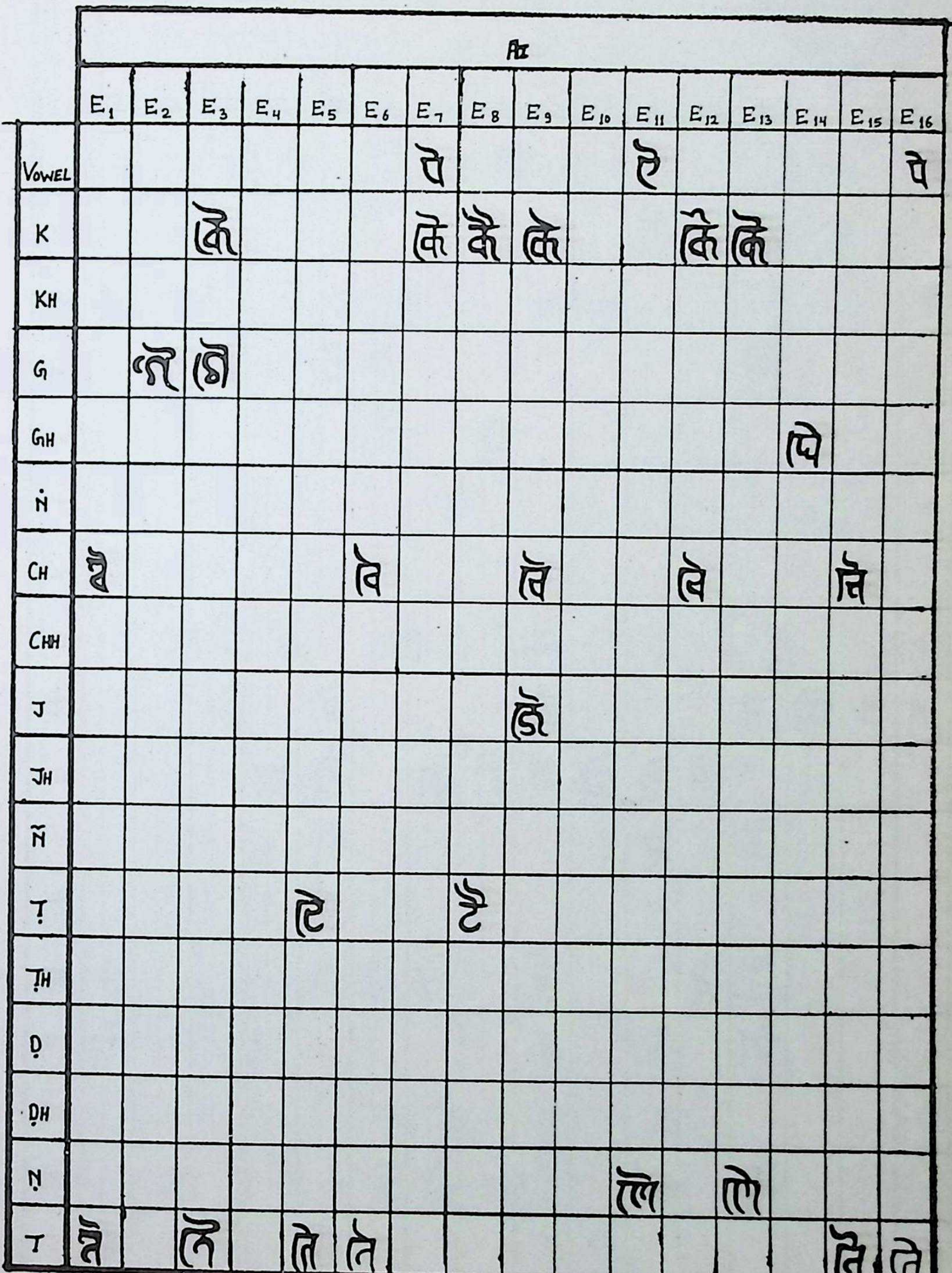

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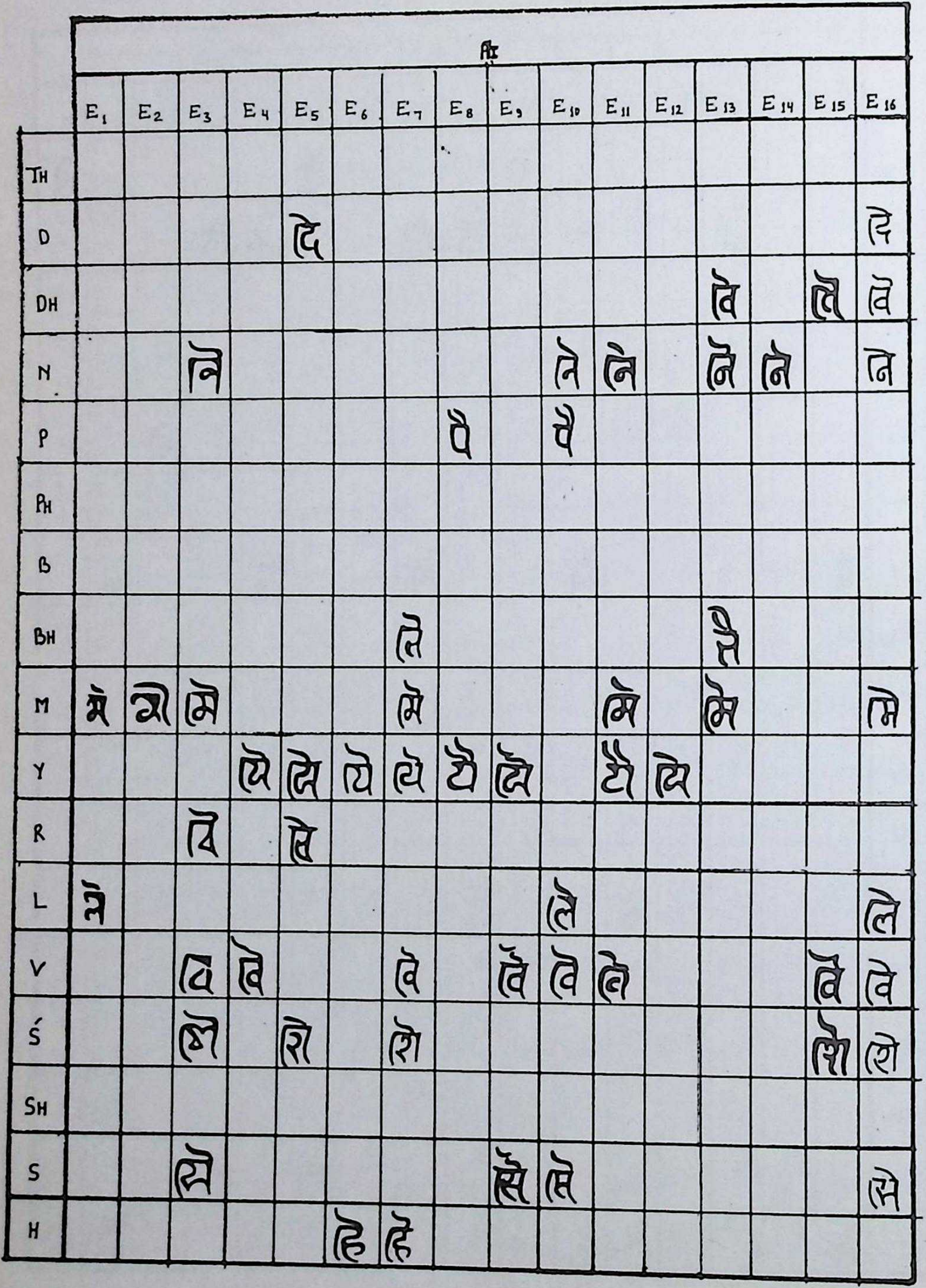
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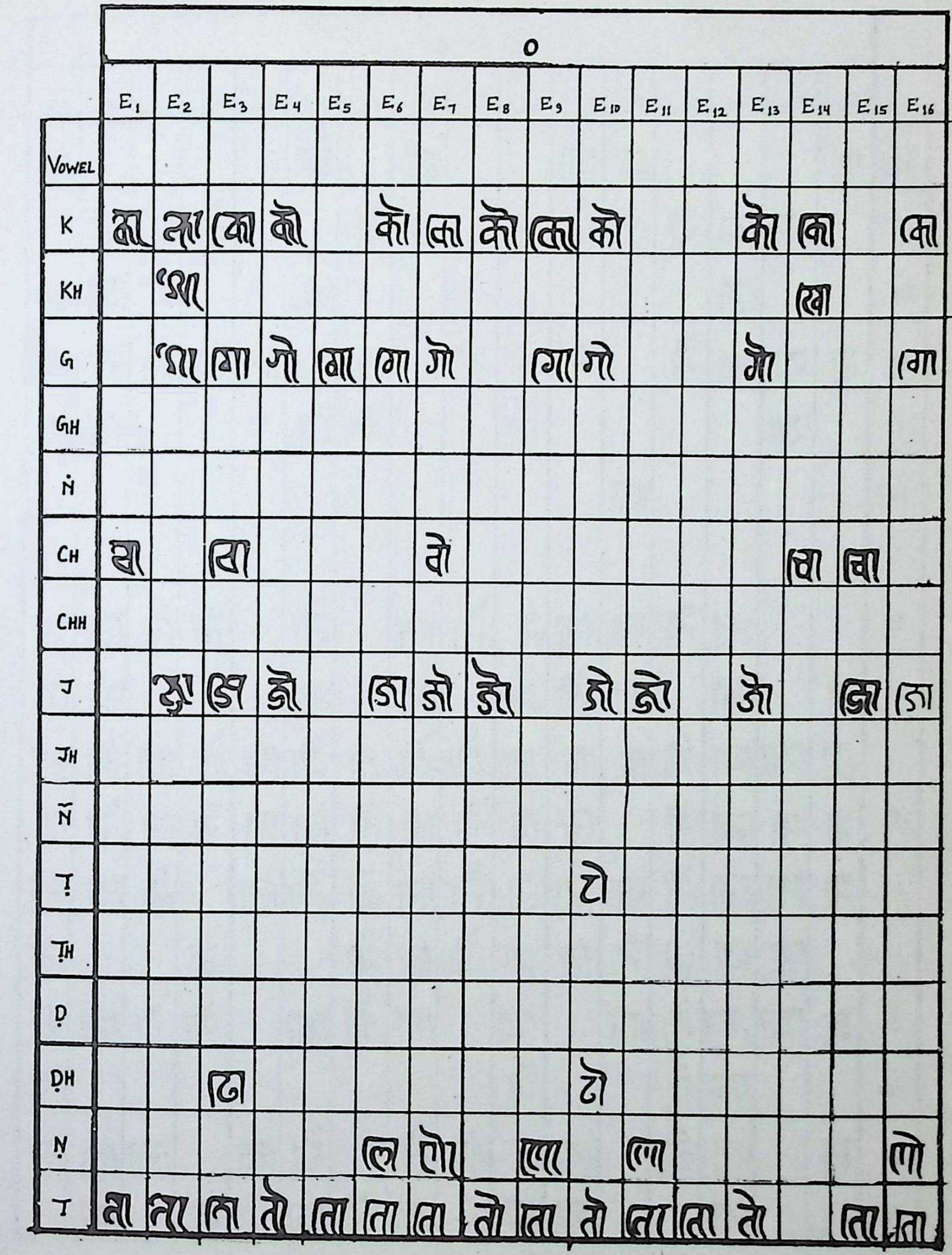
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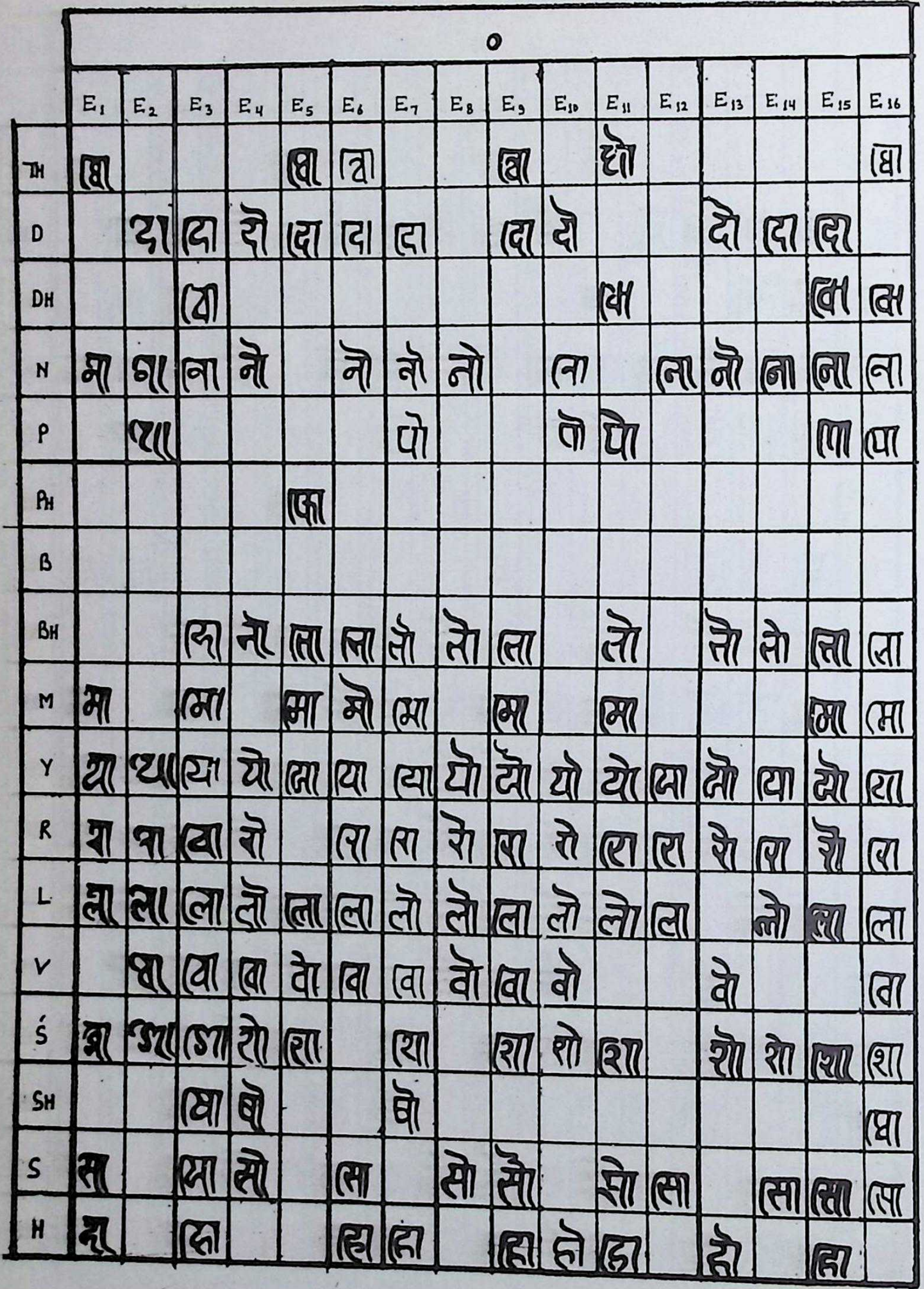
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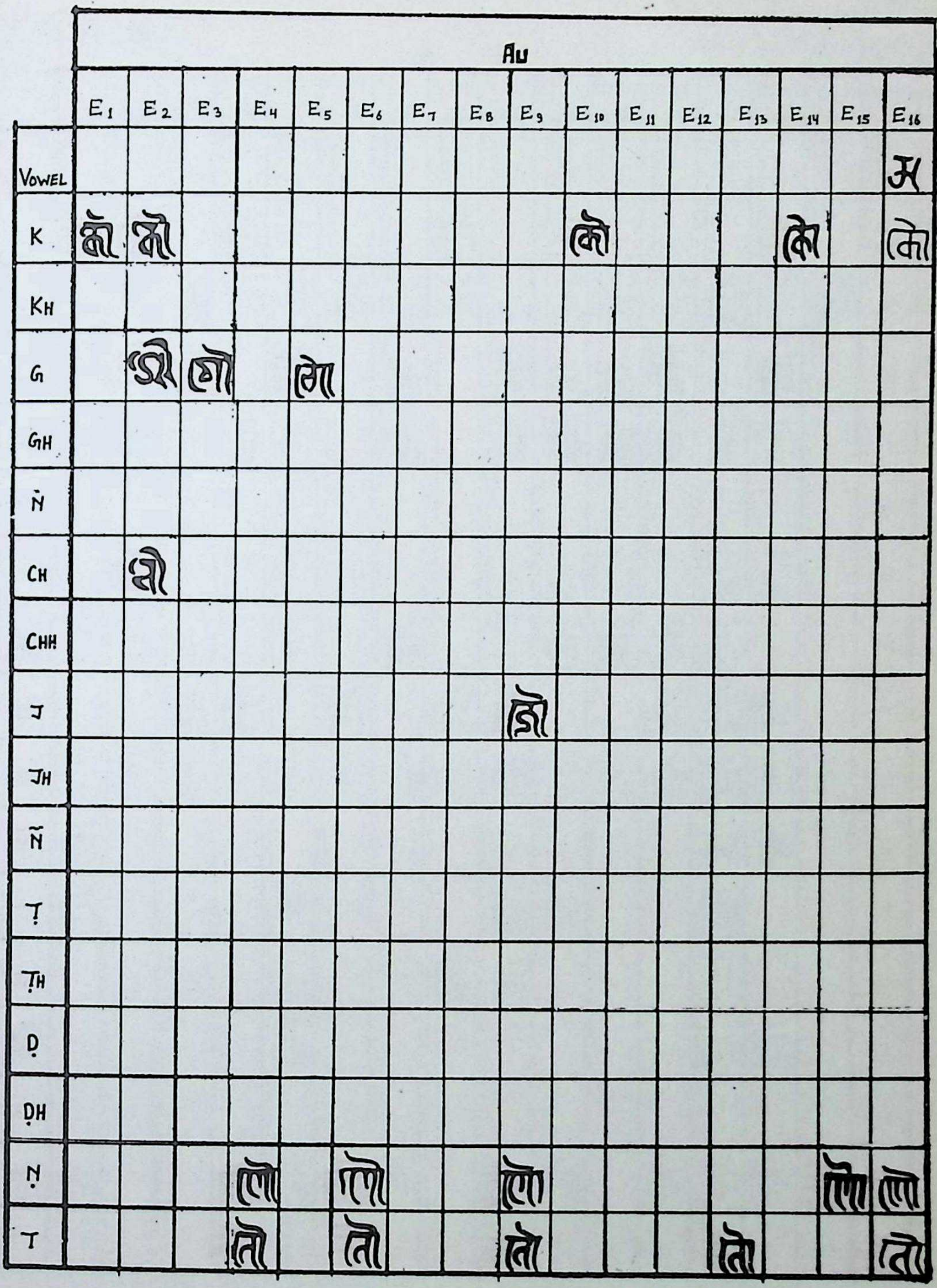

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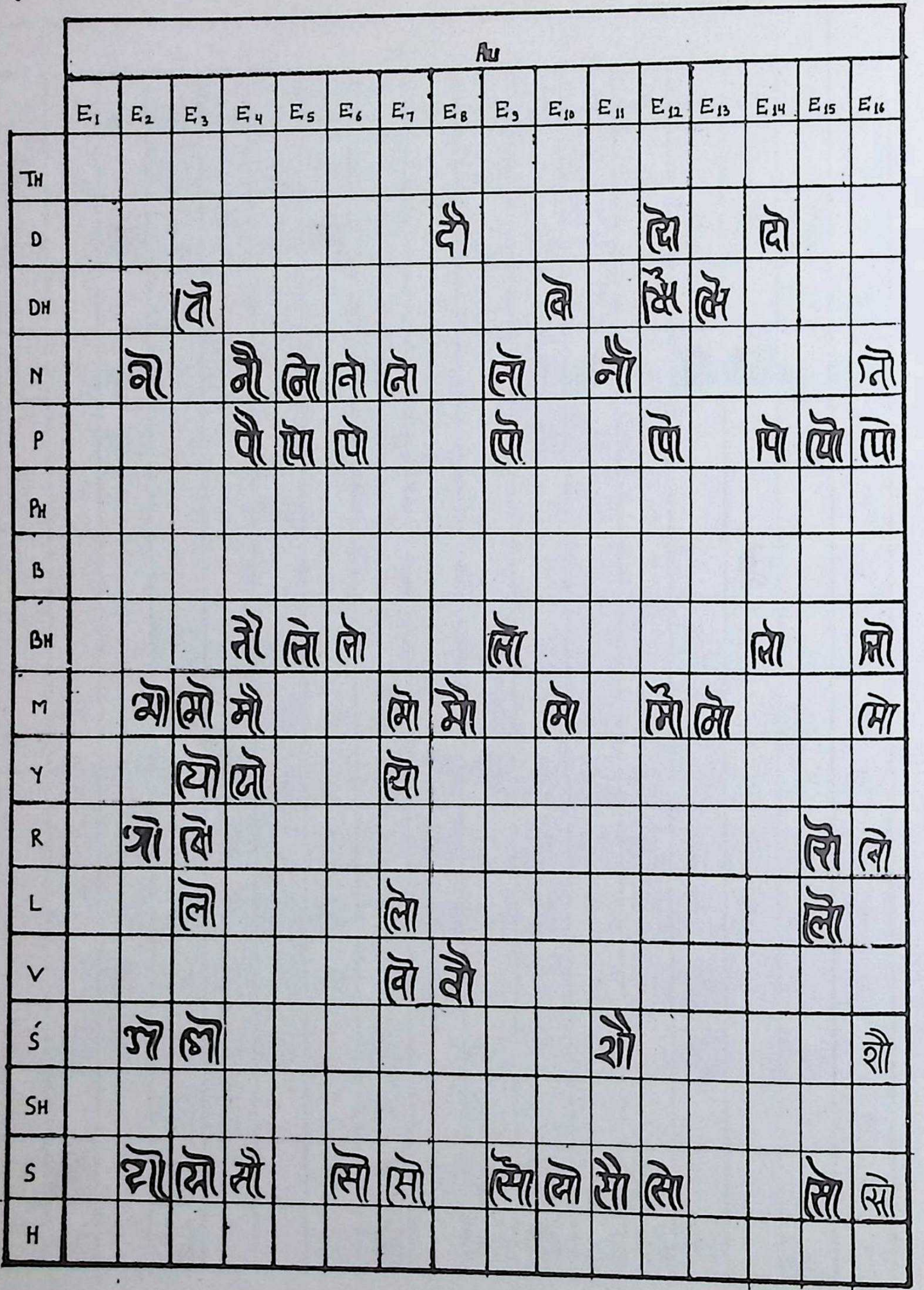
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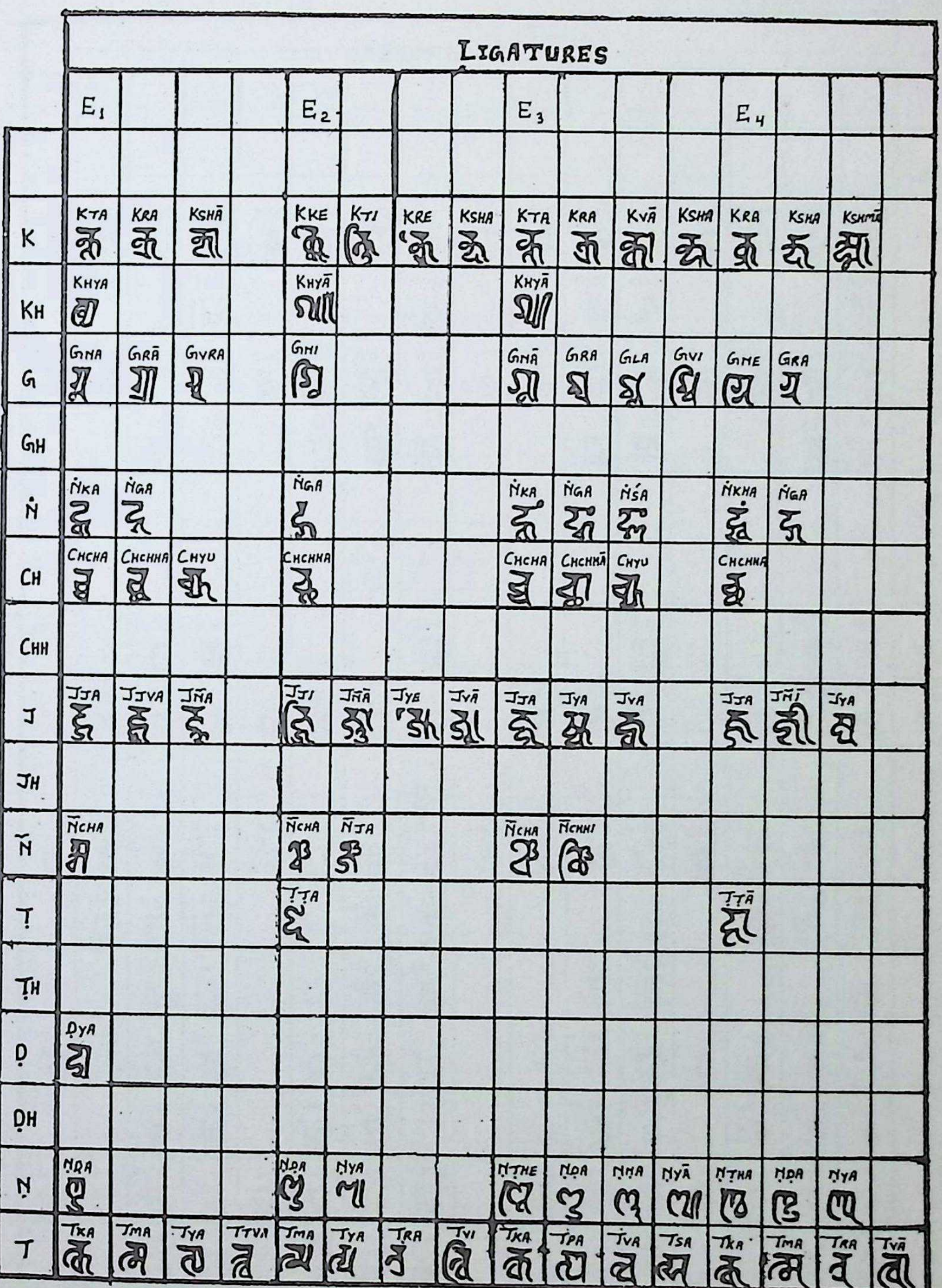

LIGATURES

	E1				E2				E3				E4			
K	KTA	KRA	KSHĀ		KKE	KTI	KRE	KSHA	KTA	KRA	KVĀ	KSHA	KRA	KSHA	KSHMĀ	
KH	KHYA				KHYĀ				KHYĀ							
G	GNA	GRĀ	GVRA		GHI				GNĀ	GRA	GLA	GVI	GNE	GRA		
GH																
Ṅ	ṄKA	ṄGA			ṄGA				ṄKA	ṄGA	ṄŚA		ṄKHA	ṄGA		
CH	CHCHA	CHCHHA	CHYU		CHCHHA				CHCHA	CHCHHĀ	CHYU		CHCHHA			
CHH																
J	JJA	JJVA	JÑA		JJI	JÑĀ	JYE	JVĀ	JJA	JYA	JVA		JJA	JÑĪ	JYA	
JH																
Ñ	ÑCHA				ÑCHA	ÑJA			ÑCHA	ÑCHHI						
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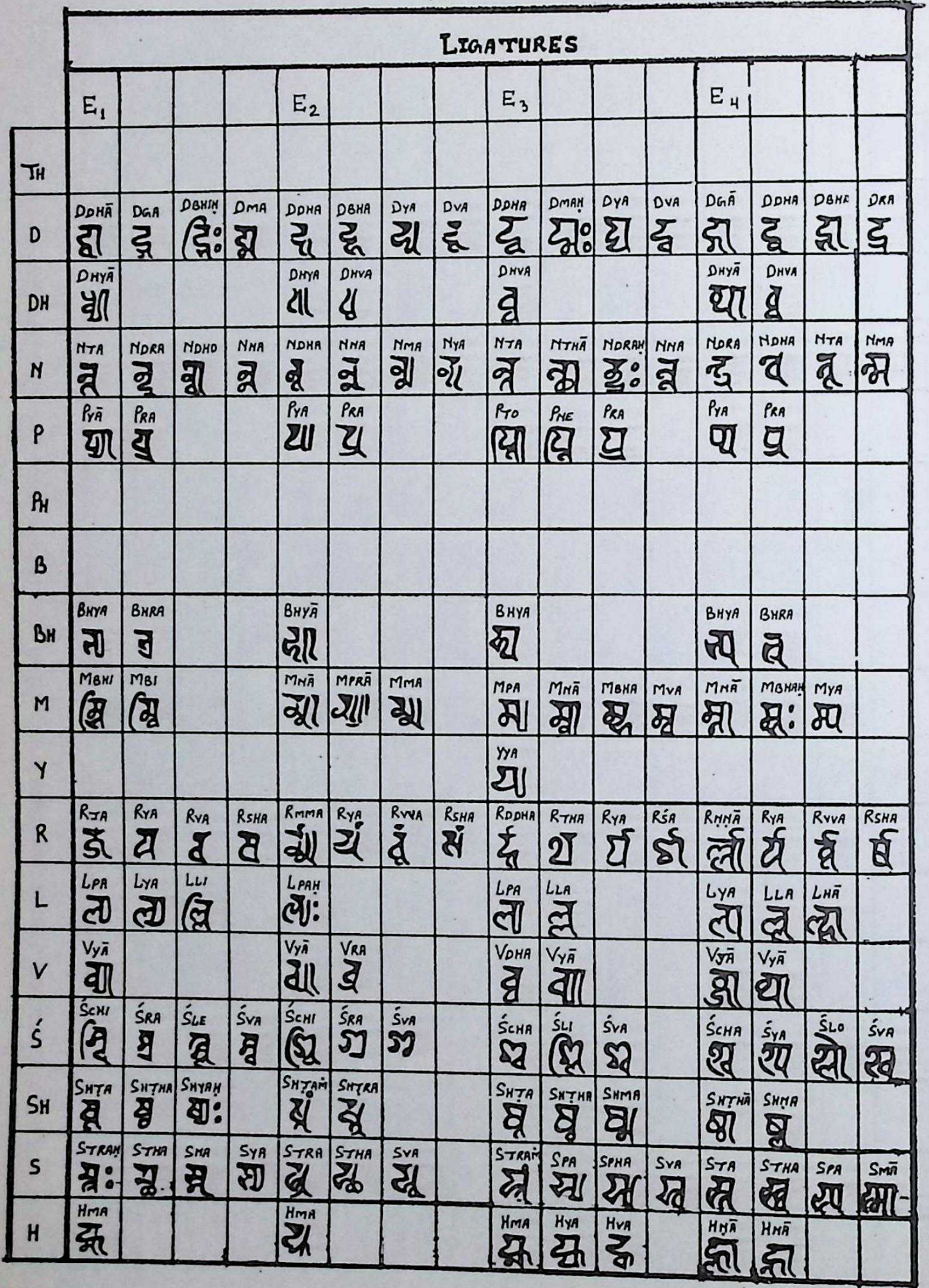
Ṇ	ṆḌA				ṆḌA	ṆYA			ṆṬHE	ṆḌA	ṆMA	ṆYĀ	ṆṬHA	ṆḌA	ṆYA	
T	TKA	TMA	TYA	TTVA	TMA	TYA	TRA	TVI	TKA	TPA	TVA	TSA	TKA	TMA	TRA	TVĀ



LIGATURES

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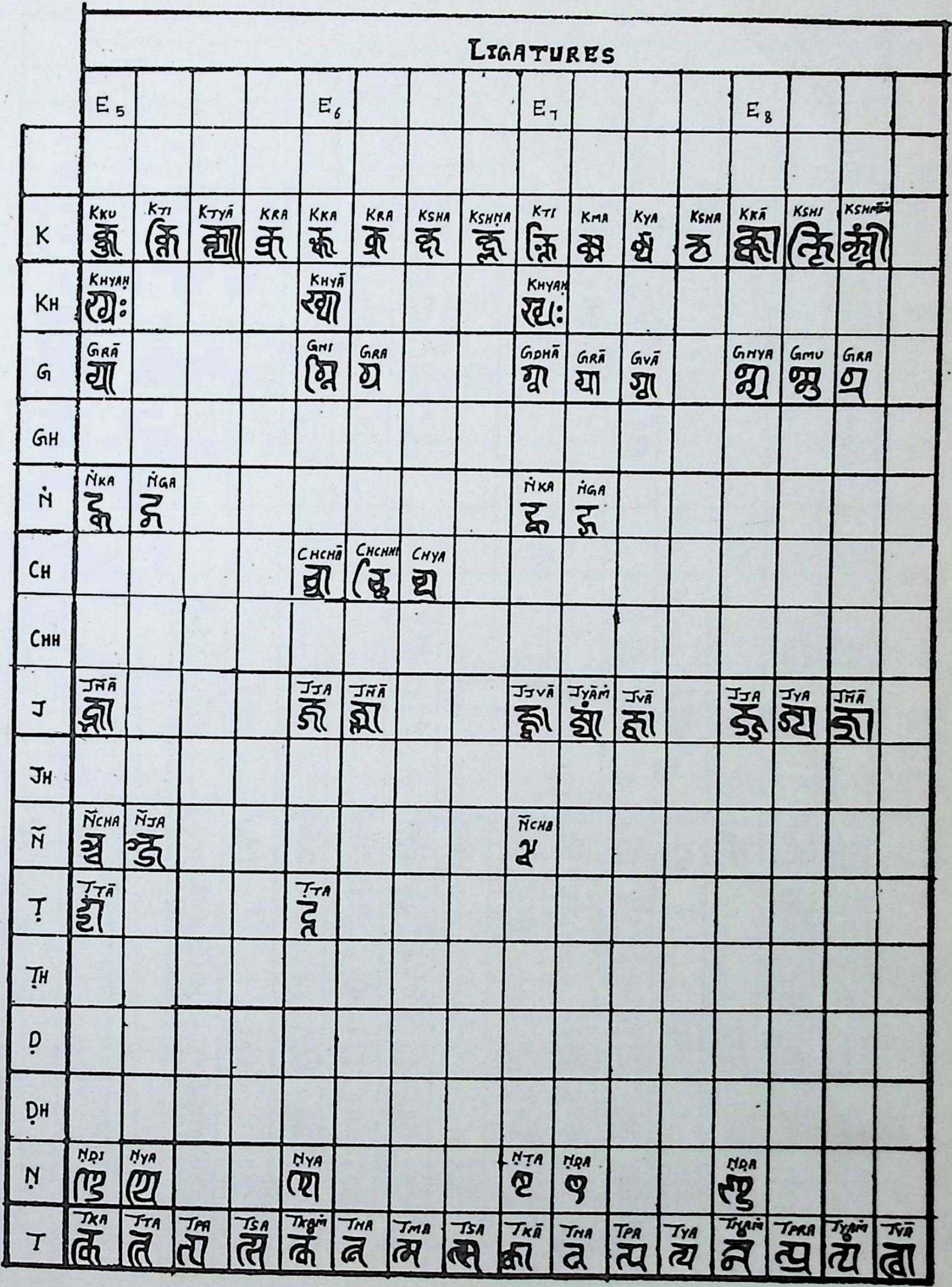
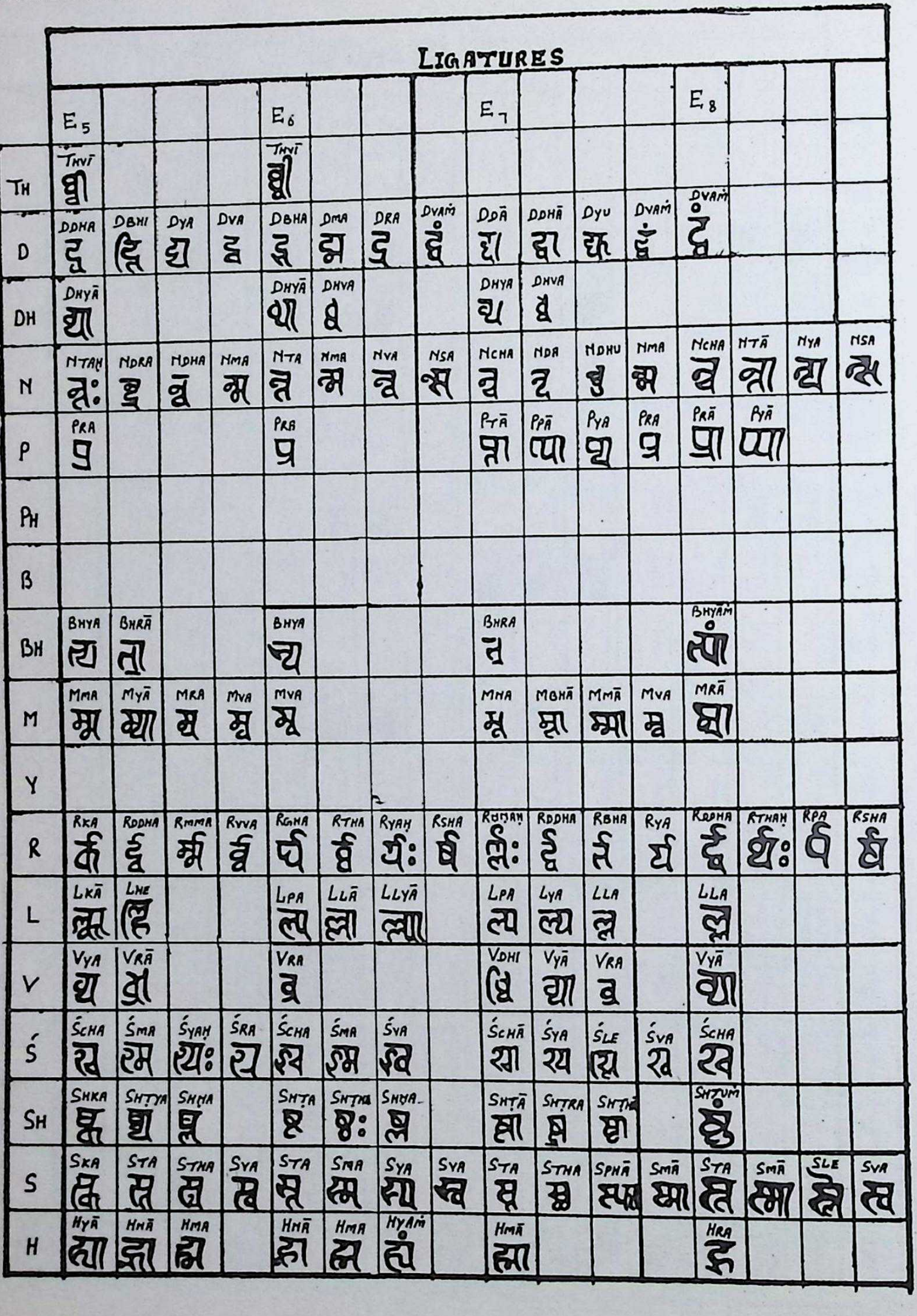
DH	DHYĀ				DHYA	DHVA			DHVA				DHYĀ	DHVA		
N	NṬA	NDRA	NDHO	NNA	NDHA	NNA	NMA	NYA	NṬA	NṬHĀ	NDRAḤ	NNA	NDRA	NDHA	NṬA	NMA
P	PYĀ	PRA			PYA	PRA			PTO	PNE	PRA		PYA	PRA		
PH																
B																
BH	BHYA	BHRA			BHYĀ				BHYA				BHYA	BHRA		
M	MBHI	MBI			MNĀ	MPRĀ	MMA		MPA	MNĀ	MBHA	MVA	MNĀ	MBHAḤ	MYA	
Y									YYA							
R	RJA	RYA	RVA	RSHA	RMMA	RYA	RVVA	RSHA	RDDHA	RTHA	RYA	RŚA	RṆṆĀ	RYA	RVVA	RSHA
L	LPA	LYA	LLI		LPAḤ				LPA	LLA			LYA	LLA	LHĀ	
V	VYĀ				VYĀ	VRA			VDHA	VYĀ			VYĀ	VYĀ		
Ś	ŚCHI	ŚRA	ŚLE	ŚVA	ŚCHI	ŚRA	ŚVA		ŚCHA	ŚLI	ŚVA		ŚCHA	ŚYA	ŚLO	ŚVA
SH	SHṬA	SHṬHA	SHYAḤ		SHṬAṀ	SHṬRA			SHṬA	SHṬHA	SHMA		SHṬHĀ	SHṆA		
S	STRAḤ	STHA	SMA	SYA	STRA	STHA	SVA		STRAṀ	SPA	SPHA	SVA	STA	STHA	SPA	SMĀ
H	HMA				HMA				HMA	HYA	HVA		HṆĀ	HṆĀ		

PLATE 145



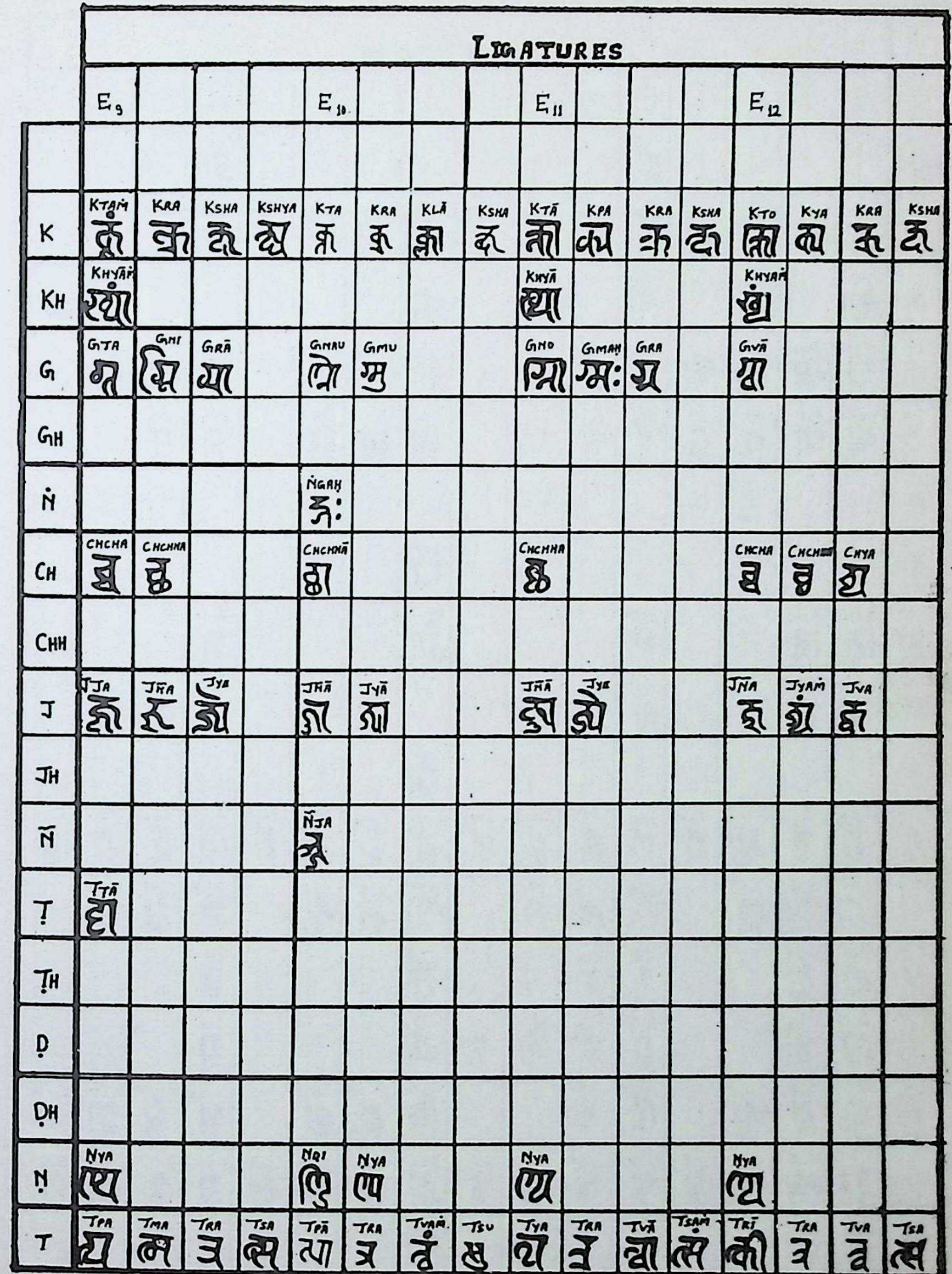
LIGATURES

	E5				E6				E7				E8			
K	KKU	KTI	KTYĀ	KRA	KKA	KRA	KSHA	KSHṆA	KTI	KMA	KYA	KSHA	KKĀ	KSHI	KSHMĪ	
KH	KHYAḤ				KHYĀ				KHYAḤ							
G	GRĀ				GNI	GRA			GDHĀ	GRĀ	GVĀ		GNYA	GMU	GRA	
GH																
Ṅ	ṄKA	ṄGA							ṄKA	ṄGA						
CH					CHCHĀ	CHCHHI	CHYA									
CHH																
J	JÑĀ				JJA	JÑĀ			JJVĀ	JYĀṂ	JVĀ		JJA	JYA	JÑĀ	
JH																
Ñ	ÑCHA	ÑJA							ÑCHA							
Ṭ	ṬṬĀ				ṬṬA											
ṬH																
Ḍ																
ḌH																
Ṇ	ṆḌI	ṆYA			ṆYA				ṆṬA	ṆḌA			ṆḌA			
T	TKA	TTA	TPA	TSA	TKAṂ	TNA	TMA	TSA	TKĀ	TNA	TPA	TYA	TNAṂ	TPRA	TYAṂ	TVĀ



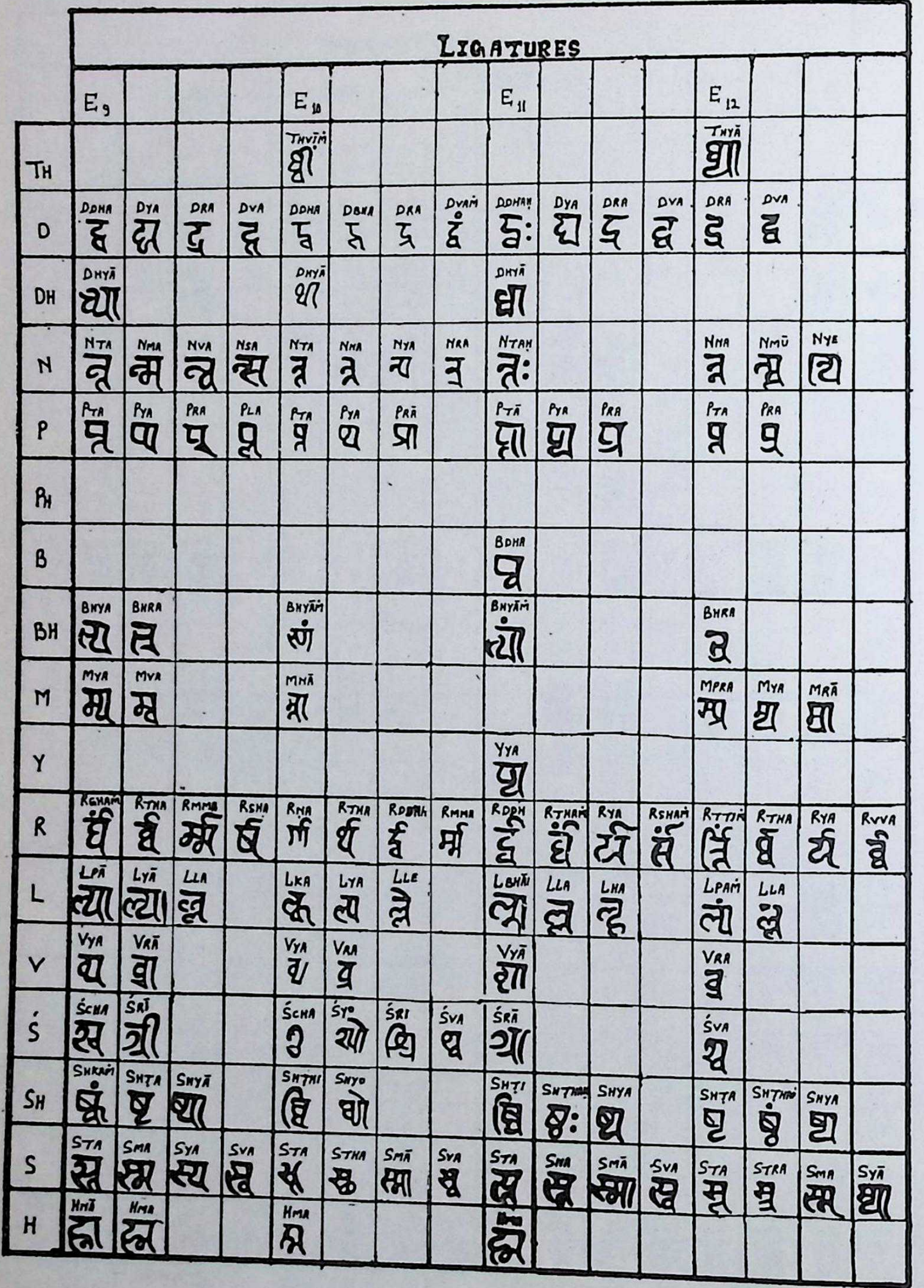
LIGATURES

	E5				E6				E7				E8			
TH	THVĪ				THVĪ											
D	DDHA	DBHI	DYA	DVA	DBHA	DMA	DRA	DVAṀ	DDĀ	DDHĀ	DYU	DVAṀ	DVAṀ			
DH	DHYĀ				DHYĀ	DHVA			DHYA	DHVA						
N	NTAḤ	NDRA	NDHA	NMA	NTA	NMA	NVA	NSA	NCHA	NDA	NDHU	NMA	NCHA	NTĀ	NYA	NSA
P	PRA				PRA				PTĀ	PPĀ	PYA	PRA	PRĀ	PYĀ		
PH																
B																
BH	BHYA	BHRĀ			BHYA				BHRA				BHYAṀ			
M	MMA	MYĀ	MRA	MVA	MVA				MNA	MBHĀ	MMĀ	MVA	MRĀ			
Y																
R	RKA	RDDHA	RMMA	RVVA	RGHA	RTHA	RYAḤ	RSHA	RḌṆAḤ	RDDHA	RBHA	RYA	RDDHA	RTHAḤ	RPA	RSHA
L	LKĀ	LHE			LPA	LLĀ	LLYĀ		LPA	LYA	LLA		LLA			
V	VYA	VRĀ			VRA				VDHI	VYĀ	VRA		VYĀ			
Ś	ŚCHA	ŚMA	ŚYAḤ	ŚRA	ŚCHA	ŚMA	ŚVA		ŚCHĀ	ŚYA	ŚLE	ŚVA	ŚCHA			
SH	SHKA	SHṬYA	SHṆA		SHṬA	SHṬHA	SHṆA		SHṬĀ	SHṬRA	SHṬH		SHṬUṀ			
S	SKA	STA	STHA	SVA	STA	SMA	SYA	SVA	STA	STHA	SPHĀ	SMĀ	STA	SMĀ	SLE	SVA
H	HYĀ	HMĀ	HMA		HMĀ	HMA	HYAṀ		HMĀ				HRA			



LIGATURES

	E9				E10				E11				E12			
K	KTAṀ	KRA	KSHA	KSHYA	KTA	KRA	KLĀ	KSHA	KTĀ	KPA	KRA	KSHA	KTO	KYA	KRA	KSHA
KH	KHYĀṀ								KHYĀ				KHYAṀ			
G	GTA	GMI	GRĀ		GMAU	GMU			GNO	GMAḤ	GRA		GVĀ			
GH																
Ṅ					ṄGAḤ											
CH	CHCHA	CHCHHA			CHCHHĀ				CHCHHA				CHCHA	CHCH[illegible]	CHYA	
CHH																
J	JJA	JHA	JYE		JHĀ	JYĀ			JHĀ	JYE			JÑA	JYAṀ	JVA	
JH																
Ñ					ÑJA											
Ṭ	ṬṬĀ															
ṬH																
Ḍ																
ḌH																
Ṇ	ṆYA				ṆRI	ṆYA			ṆYA				ṆYA			
T	TPA	TMA	TRA	TSA	TPĀ	TRA	TVAṀ	TSU	TYA	TRA	TVĀ	TSAṀ	TRĪ	TRA	TVA	TSA


LIGATURES
E9
E10
E11
E12
TH
THVĪṂ
THYĀ
D
DDHA
DYA
DRA
DVA
DDHA
DDHA
DRA
DVAṂ
DDHAḤ
DYA
DRA
DVA
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DVA
DH
DHYĀ
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DHYĀ
N
NTA
NMA
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NTA
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NYE
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BHRA
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MRĀ
Y
YYA
R
RGHAṂ
RTHA
RMMA
RSHA
RNA
RTHA
RDDHA
RMMA
RDDH
RTHAṂ
RYA
RSHAṂ
RTTIṂ
RTHA
RYA
RVVA
L
LPĀ
LYĀ
LLA
LKA
LYA
LLE
LBHĀ
LLA
LHA
LPAṂ
LLA
V
VYA
VRĀ
VYA
VRA
VYĀ
VRA
Ś
ŚCHA
ŚRĪ
ŚCHA
ŚYO
ŚRI
ŚVA
ŚRĀ
ŚVA
SH
SHKAṂ
SHṬA
SHYĀ
SHṬAI
SHYO
SHṬI
SHṬHAḤ
SHYA
SHṬA
SHṬHAṂ
SHYA
S
STA
SMA
SYA
SVA
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STHA
SMĀ
SVA
STA
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SMĀ
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STRA
SMA
SYĀ
H
HMĀ
HMA
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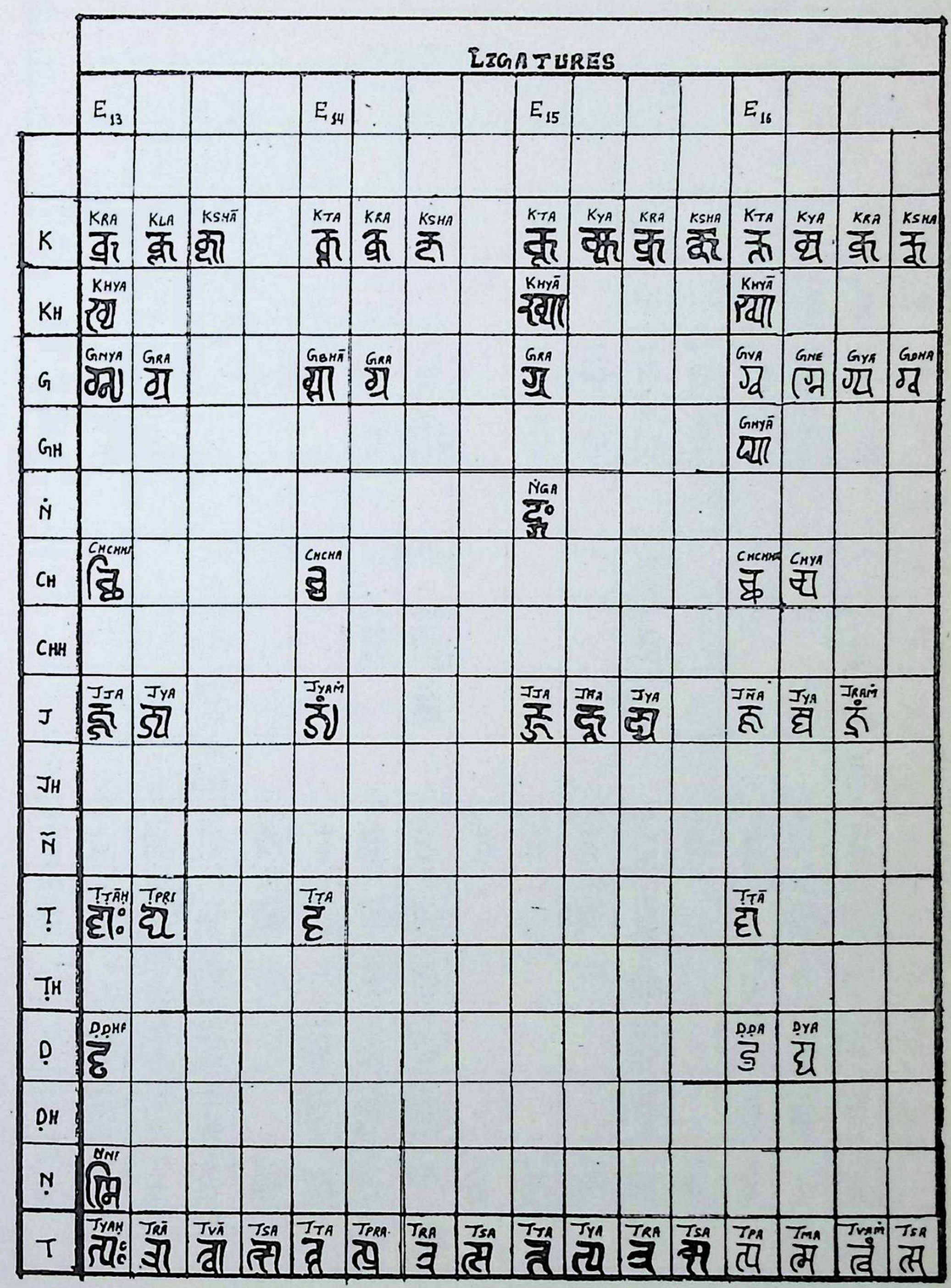
PLATE 149


LIGATURES
E13
E14
E15
E16
K
KRA
KLA
KSHĀ
KTA
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KTA
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KRA
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KHYA
KHYĀ
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G
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GVA
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ṬṬĀḤ
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T
TYAḤ
TRĀ
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TTA
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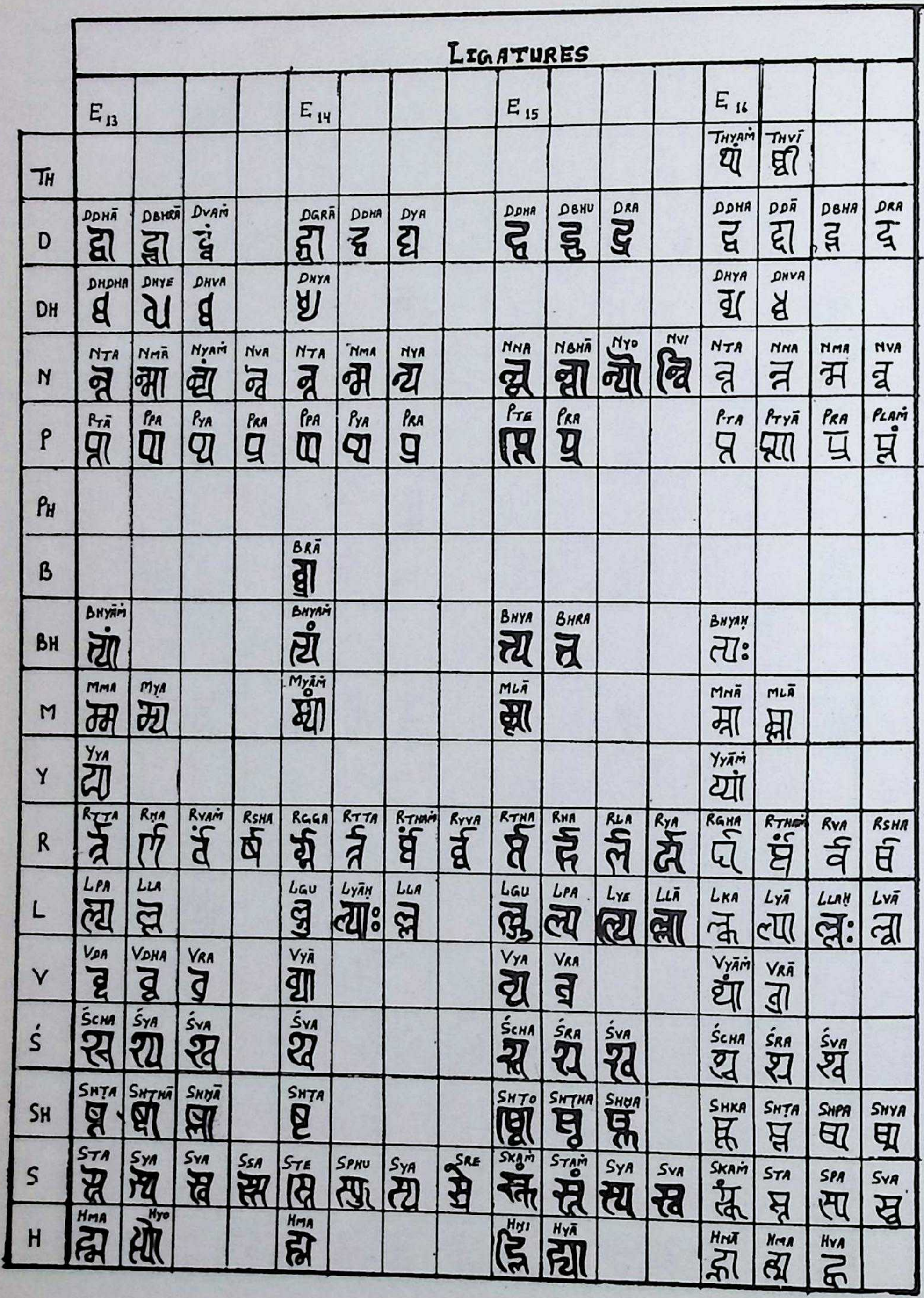
12th CENTURY A.D.

PLATE 150

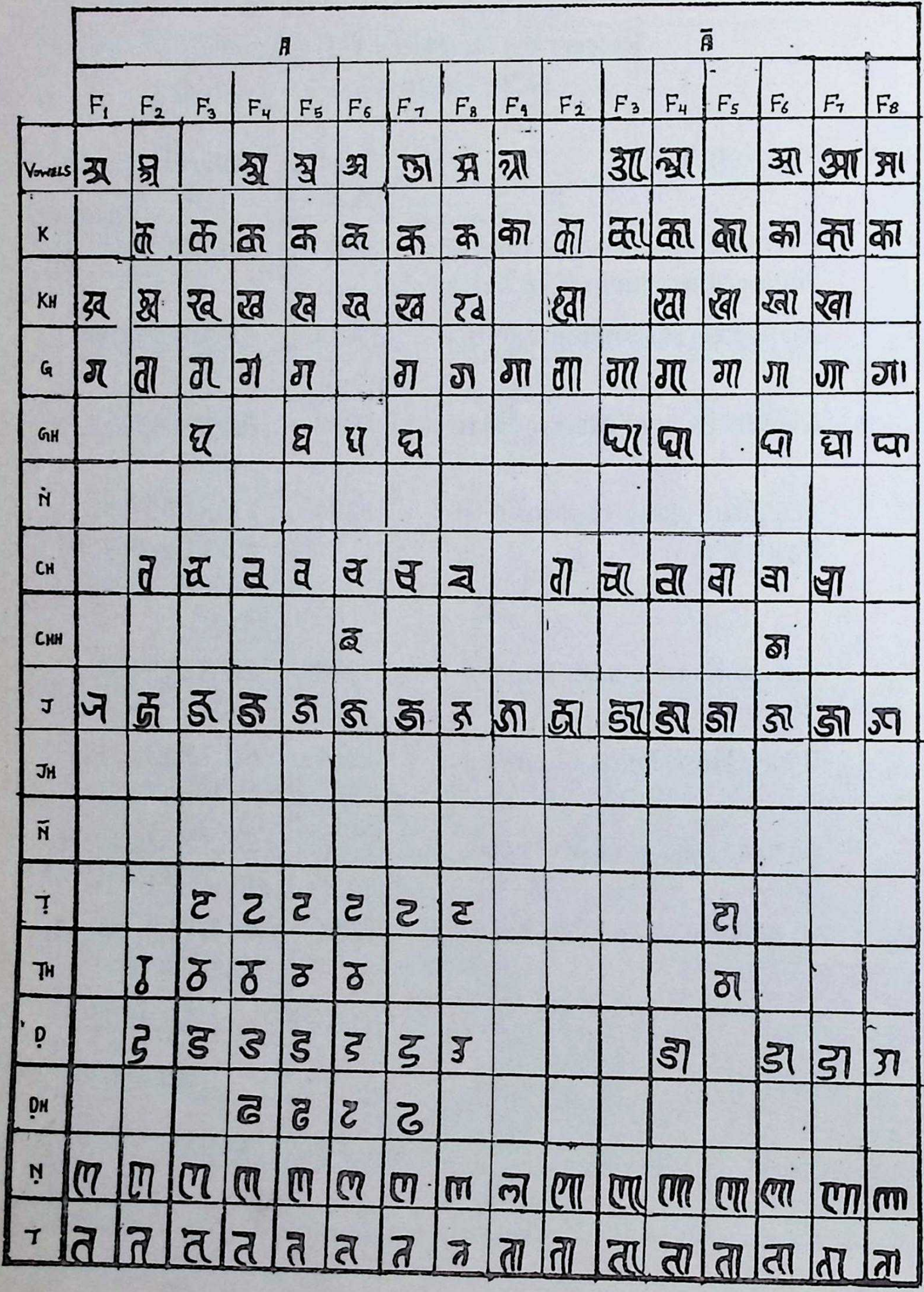


LIGATURES

	E13				E14				E15				E16			
TH													THYAṀ	THVĪ		
D	DDHĀ	DBHRĀ	DVAṀ		DGRĀ	DDHA	DYA		DDHA	DBHU	DRA		DDHA	DDĀ	DBHA	DRA
DH	DHDHA	DHYE	DHVA		DHYA								DHYA	DHVA		
N	NTA	NMĀ	NYAṀ	NVA	NTA	NMA	NYA		NNA	NBHĀ	NYO	NVI	NTA	NNA	NMA	NVA
P	PTĀ	PPA	PYA	PRA	PPA	PYA	PRA		PTE	PRA			P.TA	PTYĀ	PRA	PLAṀ
PH																
B					BRĀ											
BH	BHYĀṀ				BHYAṀ				BHYA	BHRA			BHYAḤ			
M	MMA	MYA			MYĀṀ				MLĀ				MNĀ	MLĀ		
Y	YYA												YYĀṀ			
R	RṬṬA	RṆA	RVAṀ	RSHA	RGGA	RTTA	RTHAṀ	RYVA	RTHA	RHA	RLA	RYA	RGHA	RTHAṀ	RVA	RSHA
L	LPA	LLA			LGU	LYĀḤ	LLA		LGU	LPA	LYE	LLĀ	LKA	LYĀ	LLAḤ	LVĀ
V	VDA	VDHA	VRA		VYĀ				VYA	VRA			VYĀṀ	VRĀ		
Ś	ŚCHA	ŚYA	ŚVA		ŚVA				ŚCHA	ŚRA	ŚVA		ŚCHA	ŚRA	ŚVA	
SH	SHṬA	SHṬHĀ	SHṆĀ		SHṬA				SHṬO	SHṬHA	SHṆA		SHKA	SHṬA	SHPA	SHYA
S	STA	SYA	SVA	SSA	STE	SPHU	SYA	SRE	SKAṀ	STAṀ	SYA	SVA	SKAṀ	STA	SPA	SVA
H	HMA	HYO			HMA				HṆI	HYĀ			HṆĀ	HMA	HVA	

References for Plates 151-162
(13th Century)

Table	Inscription	Date in A.D.	Reference
F_1	Gayā inscription of the time of Sultan Muizzuddin (Ghori)	1200	*JBRS*, LII, Pl. VII.
F_2	Ajayagaḍh inscription of Nāna	1288	*EI*, XXVIII, Pl. f. p., 102.
F_3	Kūreṭhā plate of Malayavarmā	1220	*EI*, XXX, Pl. f. p., 148.
F_4	Māndhātā plates of Jayasiṁha-Jayavarmā	1274	*EI*, XXXII, Pls. b. pp. 148-49, 150-51, 154-55 & f. p., 156.
F_5	Kavāljī Temple inscription of Hammīr	1288	*EI*, XIX, Pl. f. p., 50.
F_6	Verāval inscription of Arjuna	1264	*EI*, XXXIV, Pl. f. p., 148.
F_7	Kālegāon plates of Mahādeva	1260	*EI*, XXXII, Pls. b. pp. 38-39 & 42-43.
F_8	Karṇāṭak plates of Vīra-Ballāla II	1204	*KI*, I, Pl. f. pp. 58, 60, 62 & 64.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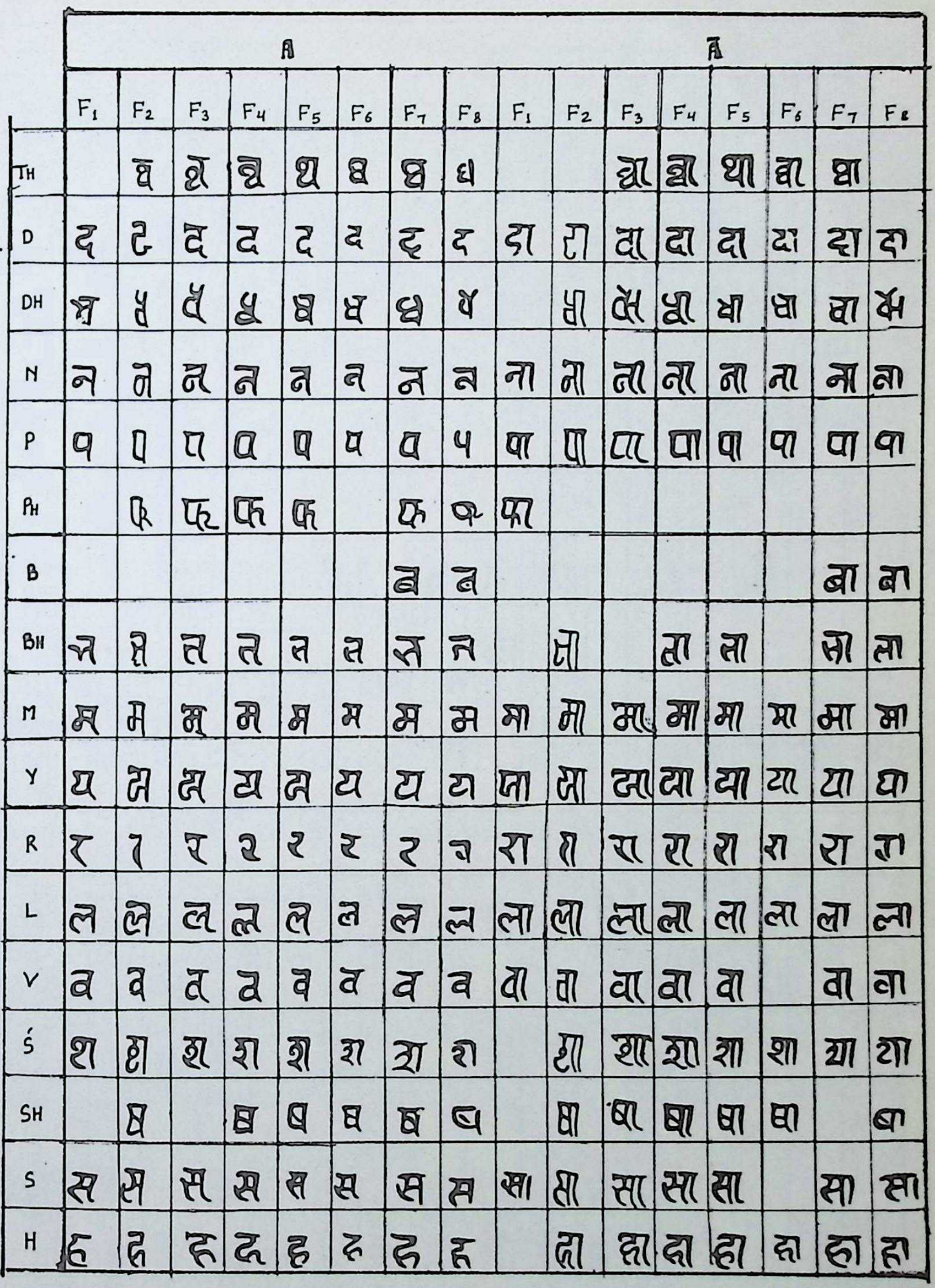
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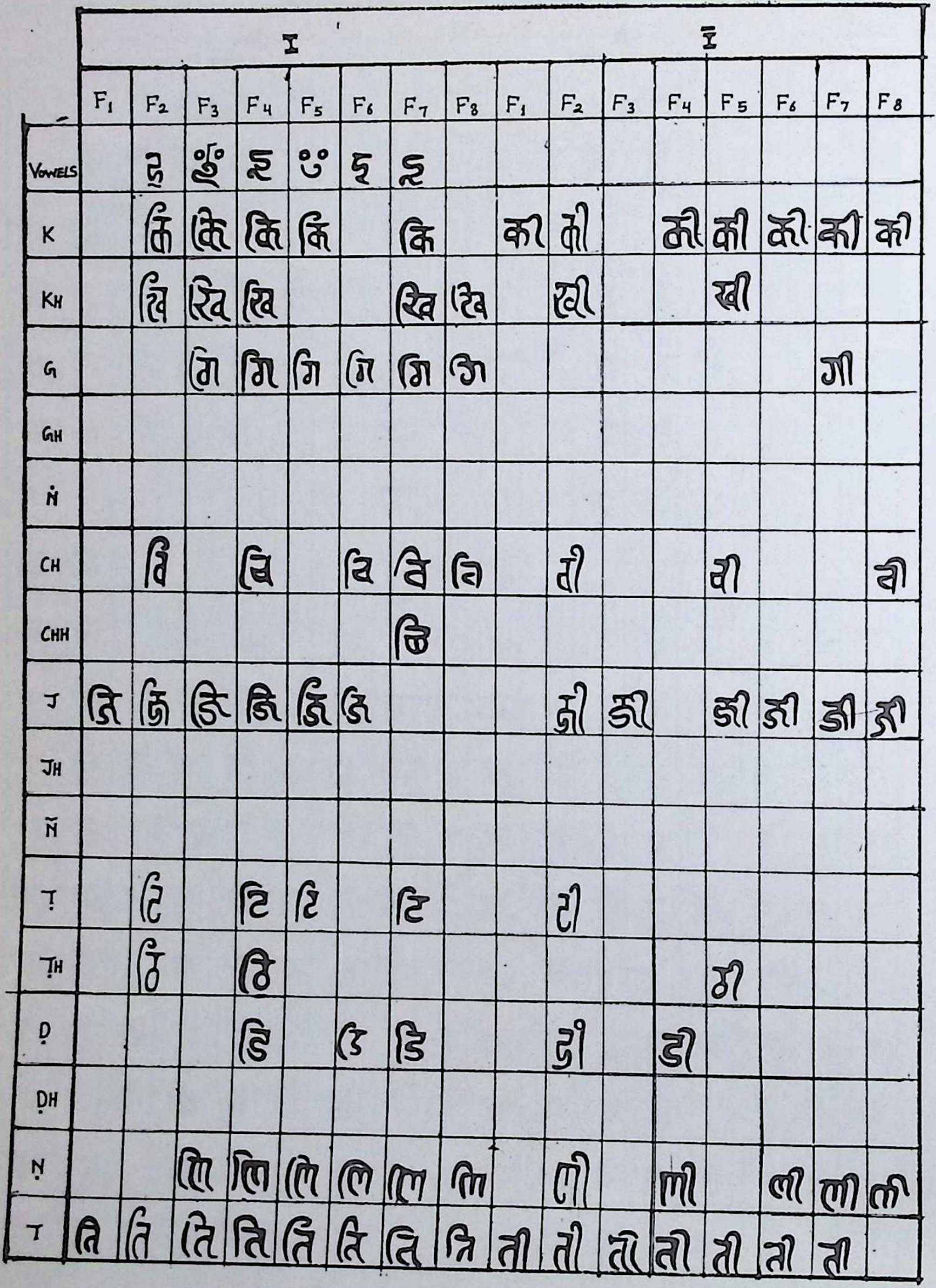
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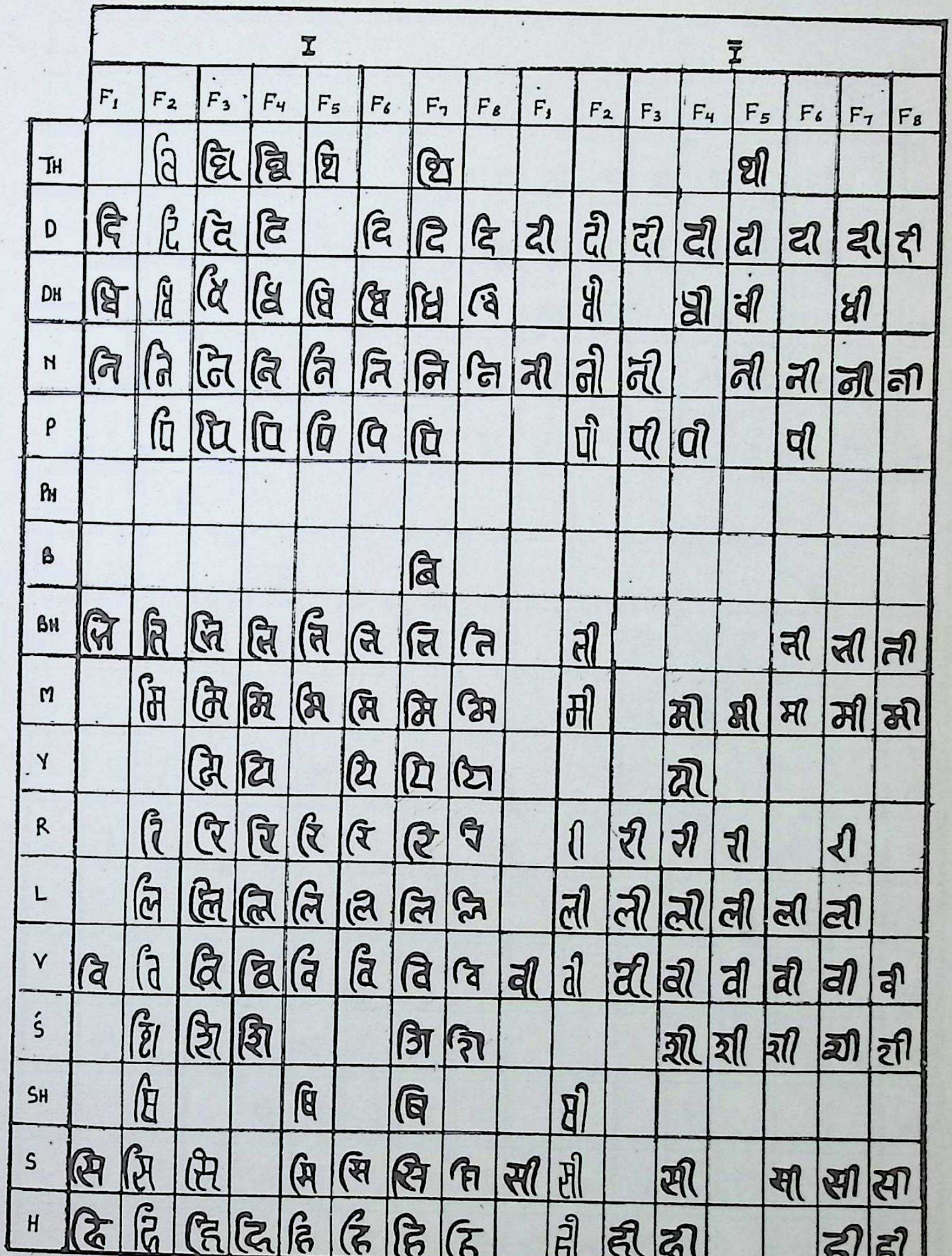
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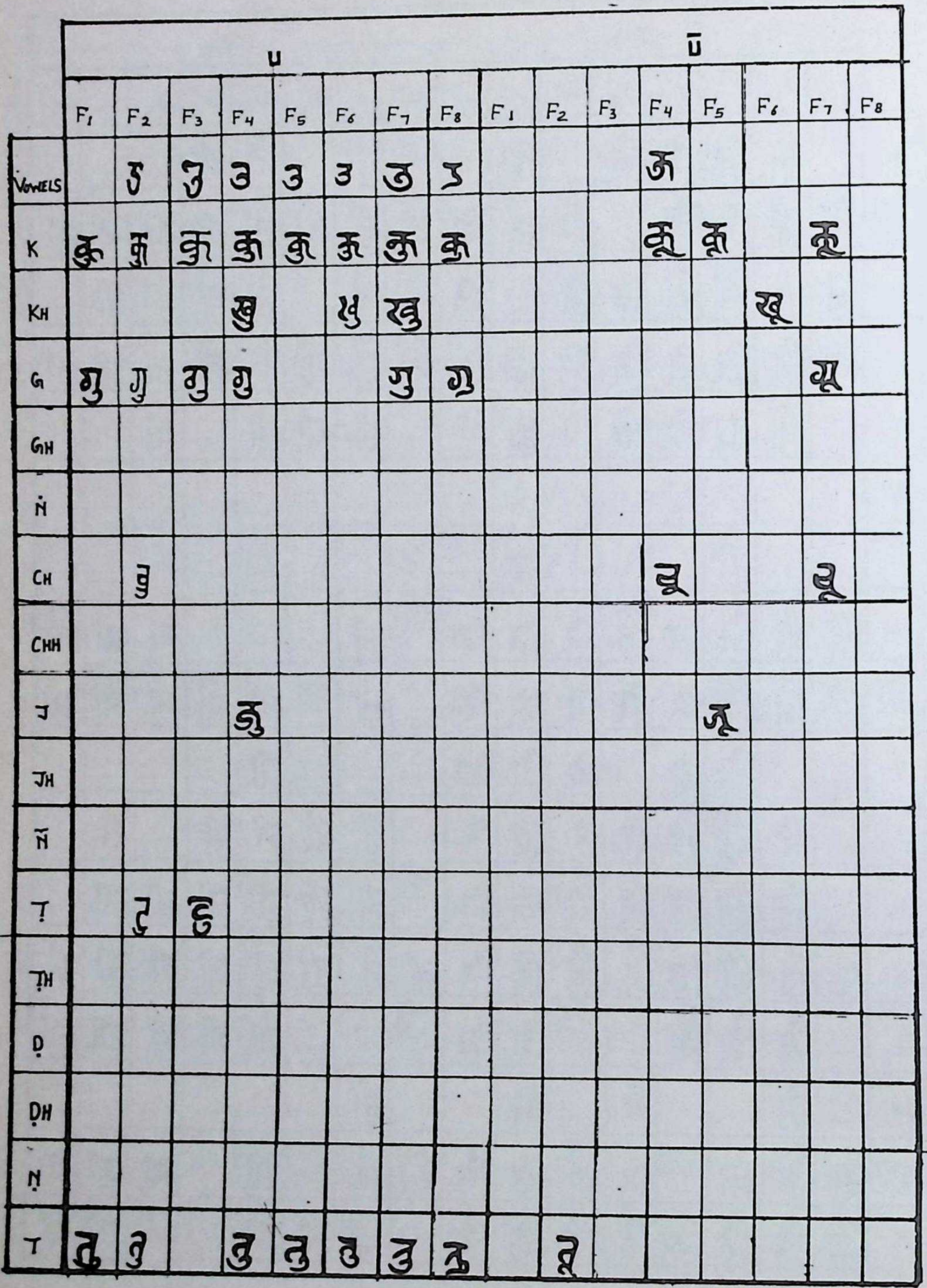
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VOWELS
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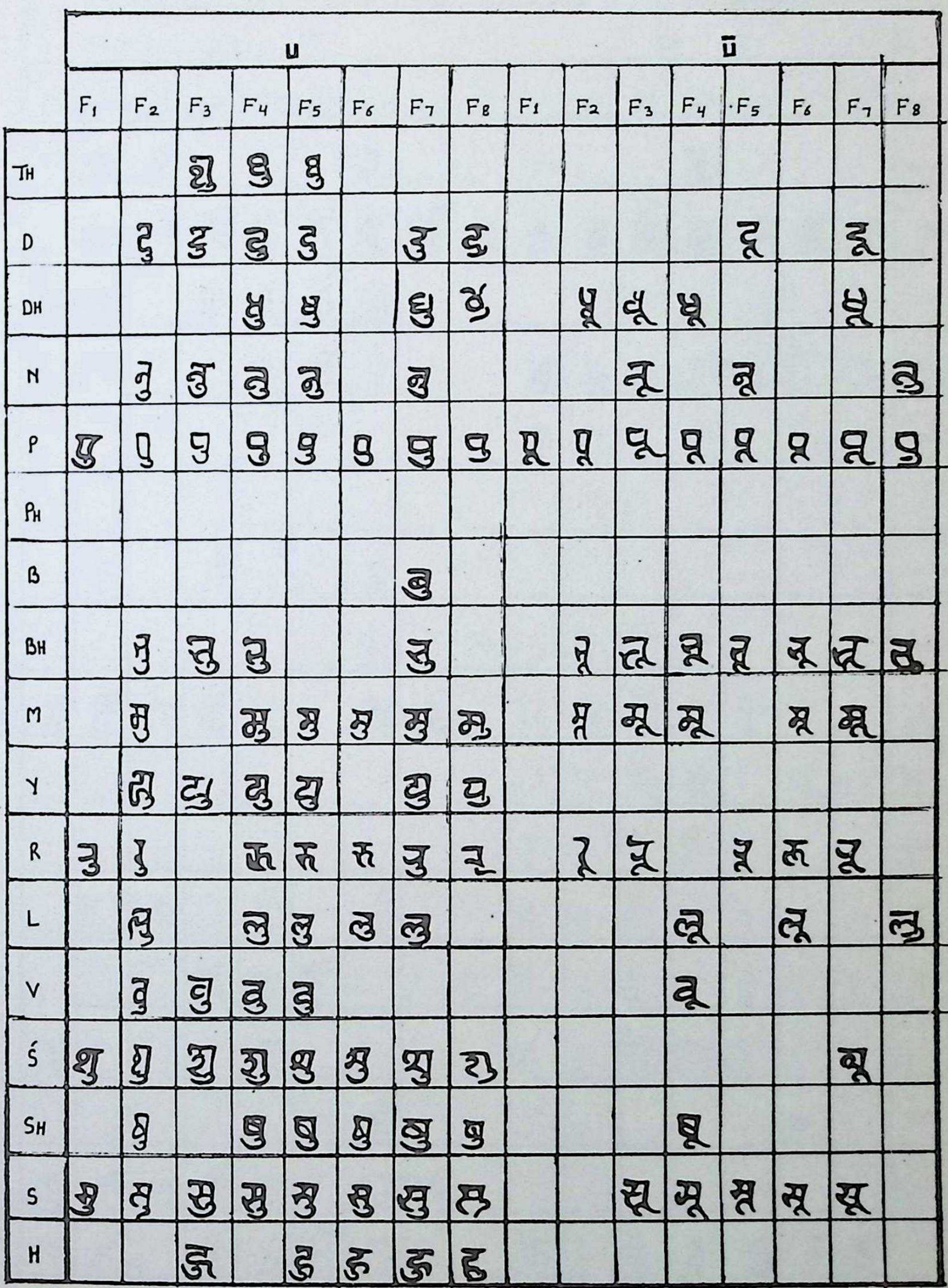

	u								ū							
	F1	F2	F3	F4	F5	F6	F7	F8	F1	F2	F3	F4	F5	F6	F7	F8
TH			थु	थु	थु											
D		दु	दु	दु	दु		दु	दु					दू		दू	
DH				धु	धु		धु	धु		धू	धू	धू			धू	
N		नु	नु	नु	नु		नु				नू		नू			नू
P	पु	पु	पु	पु	पु	पु	पु	पु	पू	पू	पू	पू	पू	पू	पू	पू
PH																
B							बु									
BH		भु	भु	भु			भु			भू	भू	भू	भू	भू	भू	भू
M		मु		मु	मु	मु	मु	मु		मू	मू	मू		मू	मू	
Y		यु	यु	यु	यु		यु	यु								
R	रु	रु		रु	रु	रु	रु	रु		रू	रू		रू	रू	रू	
L		लु		लु	लु	लु	लु					लू		लू		लू
V		वु	वु	वु	वु							वू				
Ś	शु	शु	शु	शु	शु	शु	शु	शु							शू	
SH		षु		षु	षु	षु	षु	षु				षू				
S	सु	सु	सु	सु	सु	सु	सु	सु			सू	सू	सू	सू	सू	
H			हु		हु	हु	हु	हु								

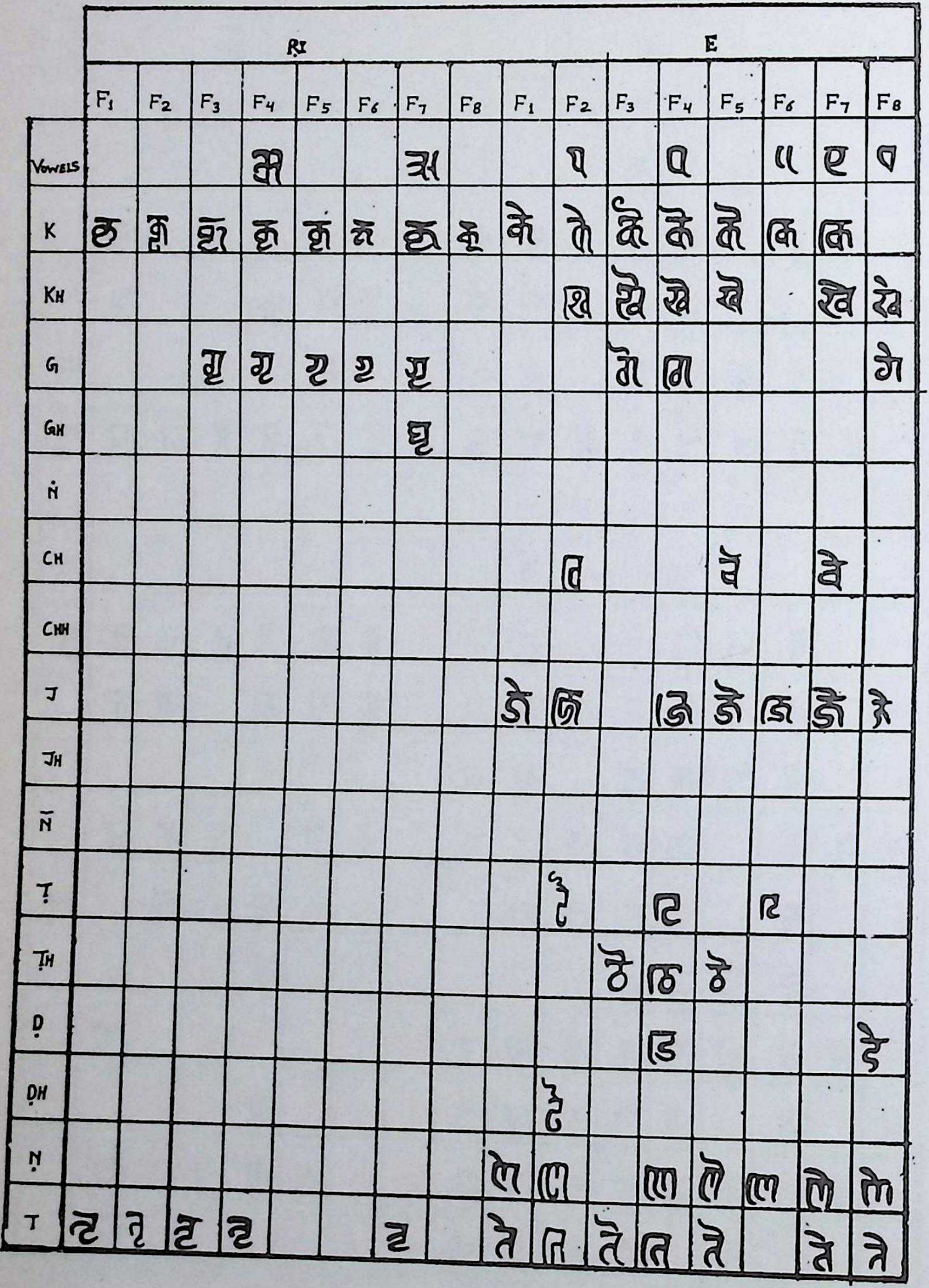

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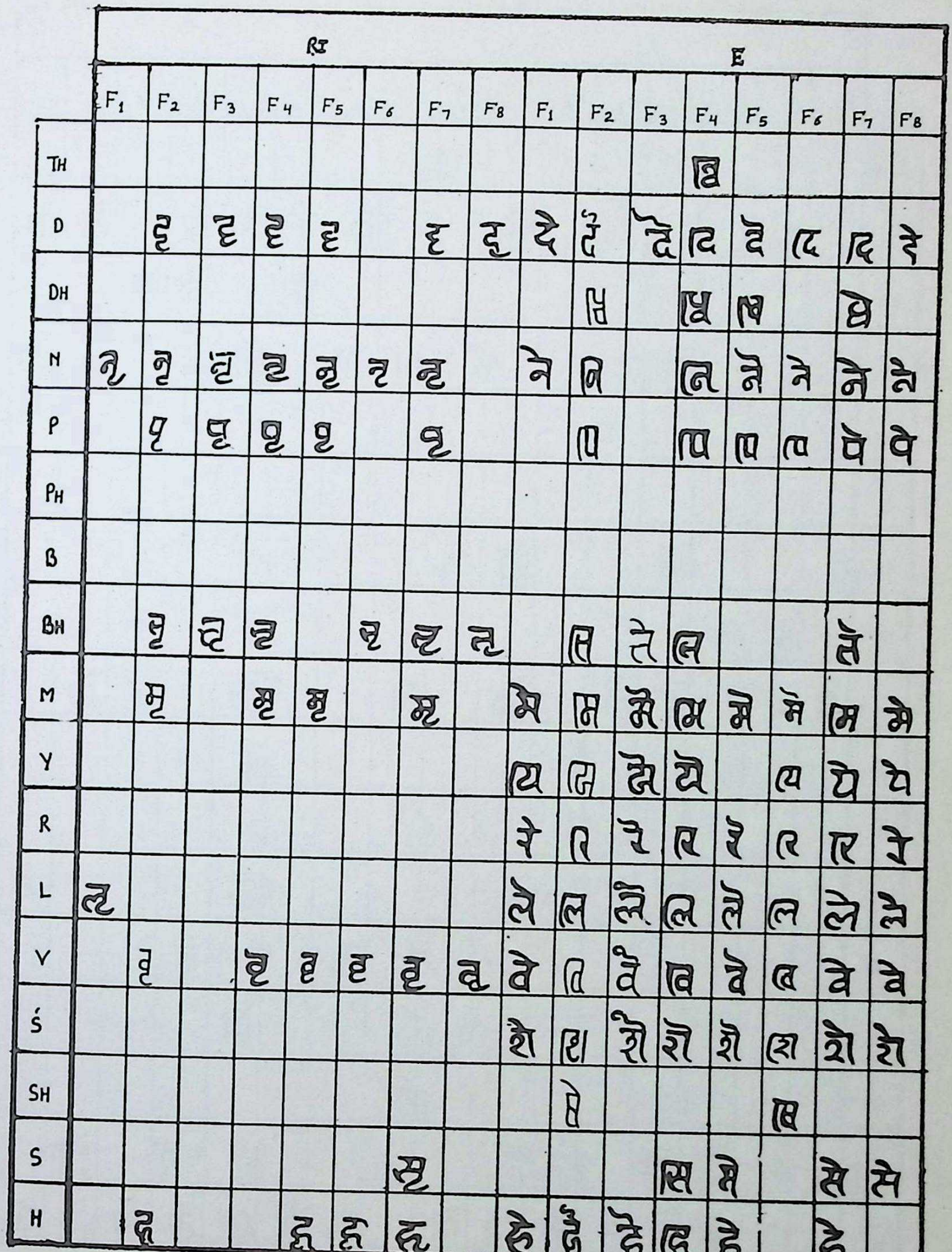
PLATE 158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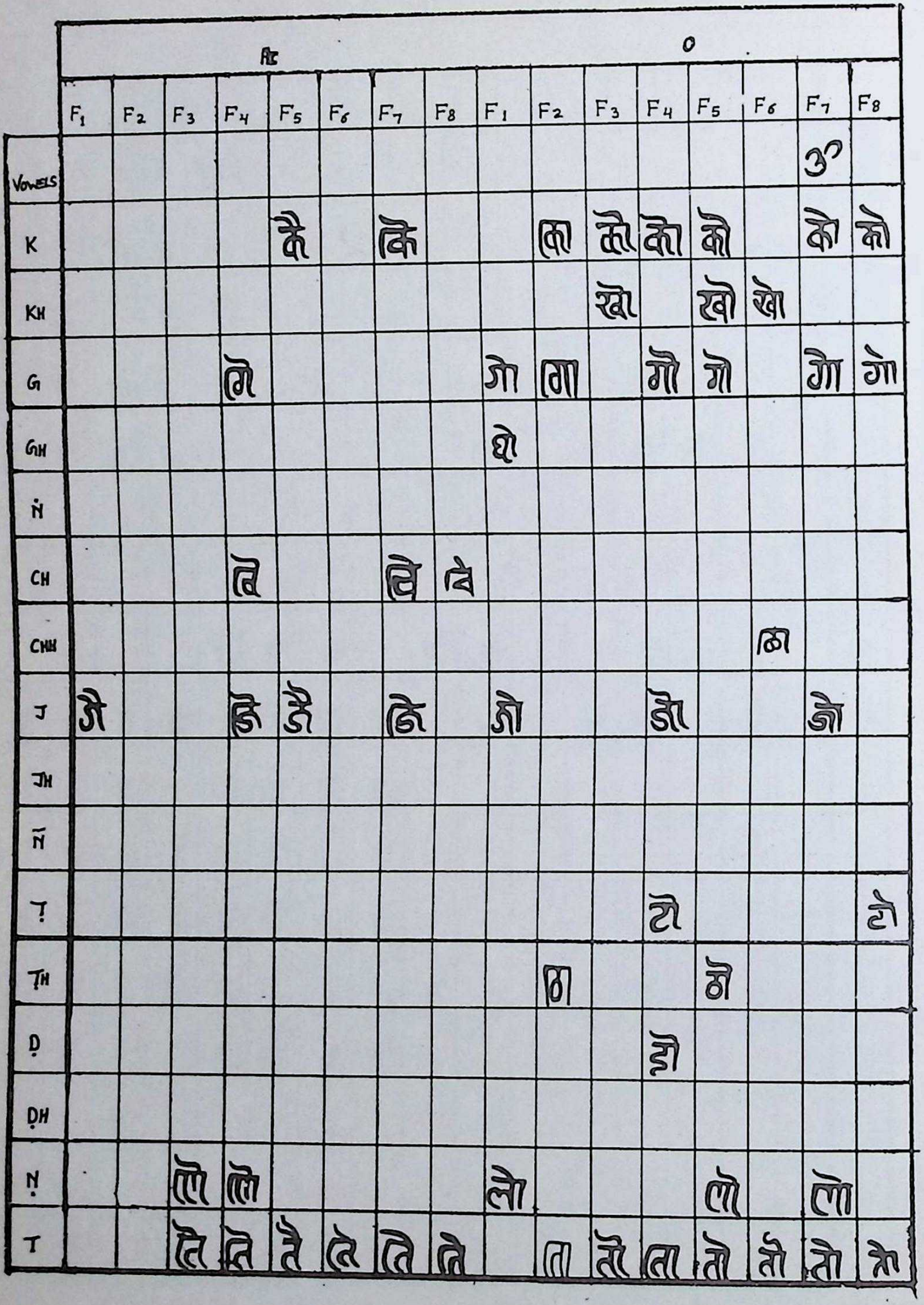
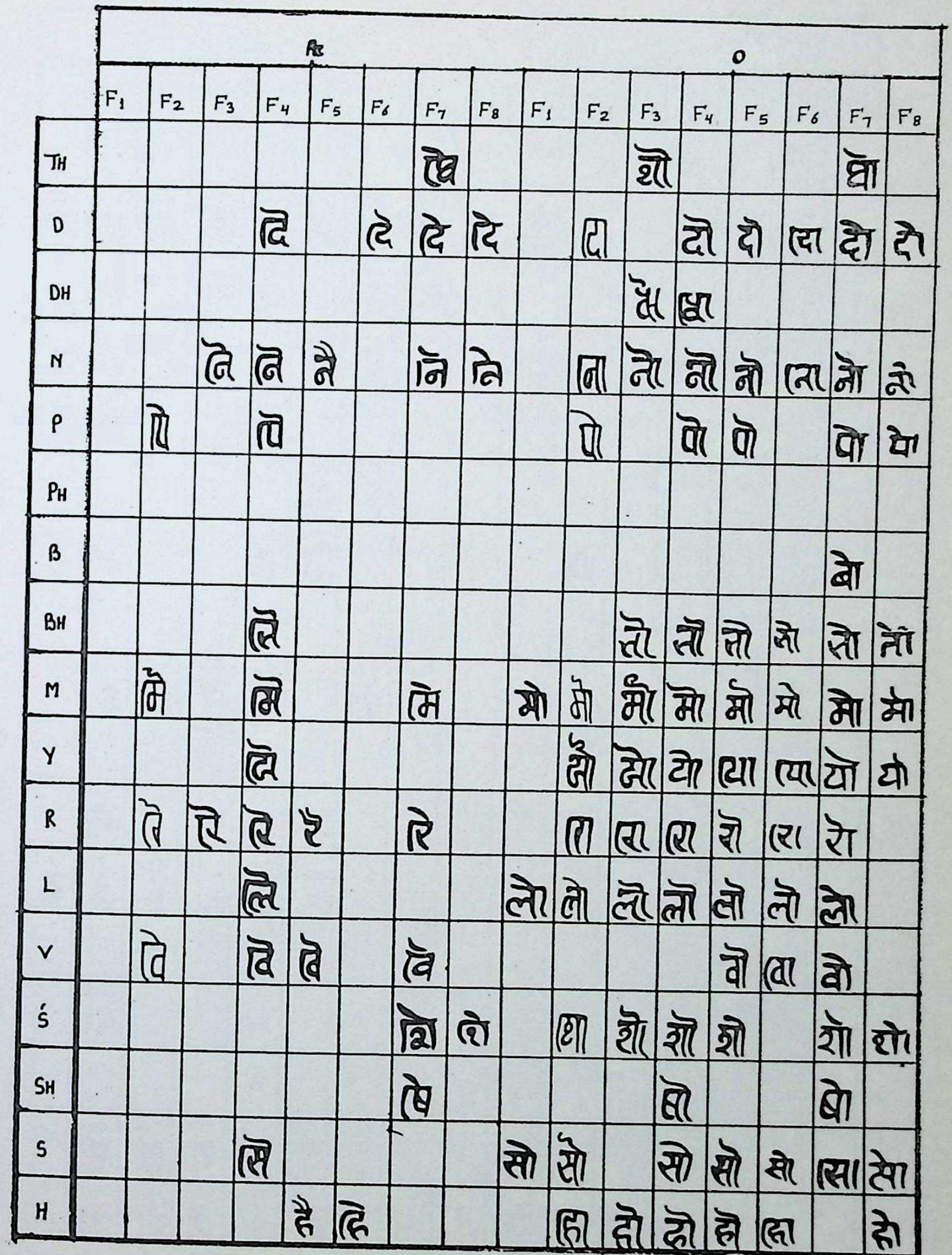
13th CENTURY A.D.



	Ai								O							
	F1	F2	F3	F4	F5	F6	F7	F8	F1	F2	F3	F4	F5	F6	F7	F8
Vowels															ओ	
K					कै		कै			को	को	को	को		को	को
KH											खो		खो	खो		
G				गै					गो	गो		गो	गो		गो	गो
GH									घो							
Ṅ																
CH				चै			चै	चै								
CHH														छो		
J	जै			जै	जै		जै		जो			जो			जो	
JH																
Ñ																
Ṭ												टो				टो
ṬH										ठो			ठो			
Ḍ												डो				
ḌH																
Ṇ			णै	णै					णो				णो		णो	
T			तै	तै	तै	तै	तै	तै		तो	तो	तो	तो	तो	तो	तो

13th CENTURY A.D.

PLATE 160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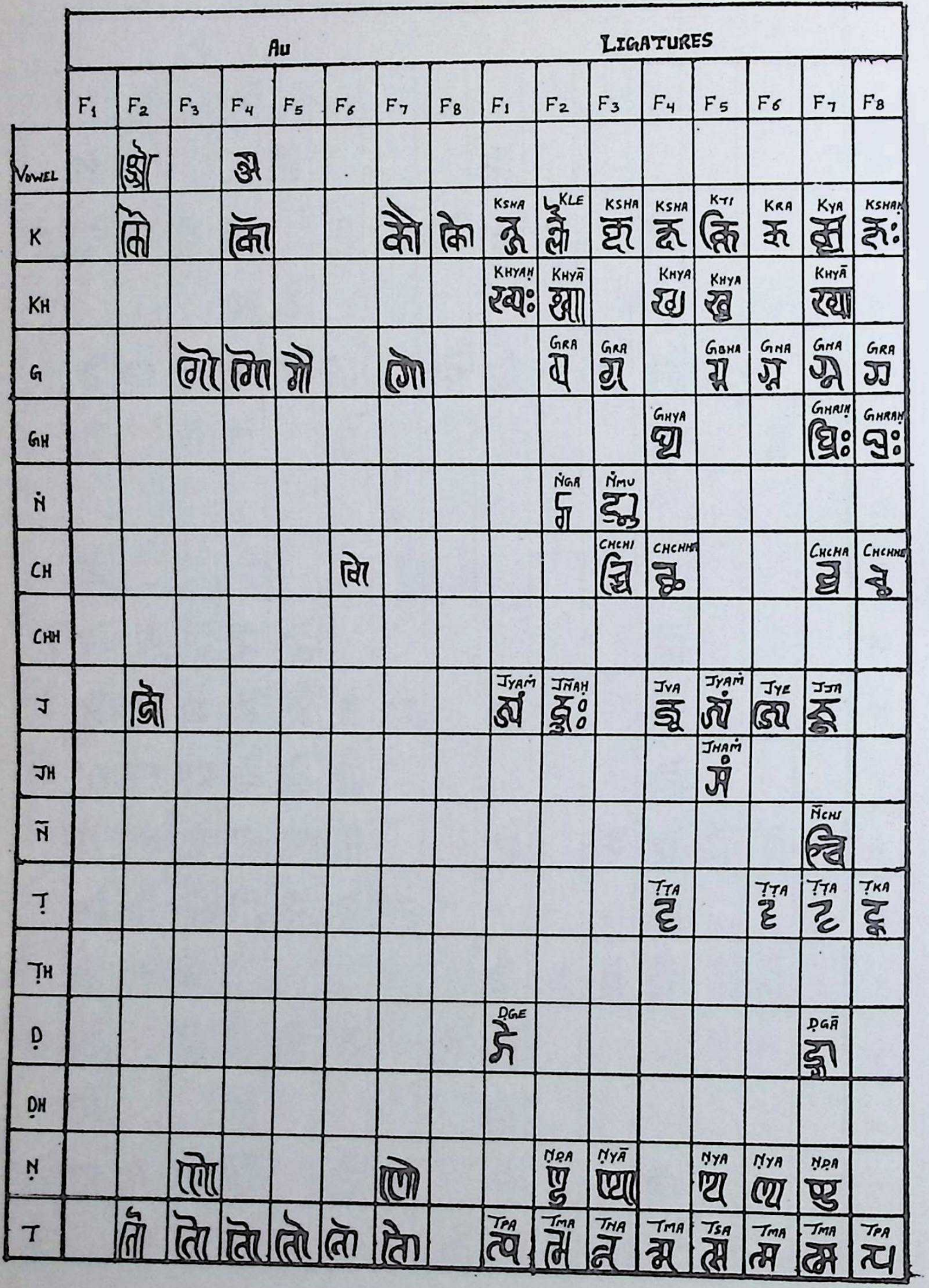
Au
LIGATURES
F1 F2 F3 F4 F5 F6 F7 F8
F1 F2 F3 F4 F5 F6 F7 F8
VOWEL
K
KSHA KLE KSHA KSHA K-TI KRA KYA KSHAḤ
KH
KHYAḤ KHYĀ KHYA KHYA KHYĀ
G
GRA GRA GBHA GNA GNA GRA
GH
GHYA GHRIḤ GHRAḤ
Ṅ
ṄGA ṄMU
CH
CHCHI CHCHHA CHCHA CHCHHA
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JYAṀ JÑAḤ JVA JYAṀ JYE JJA
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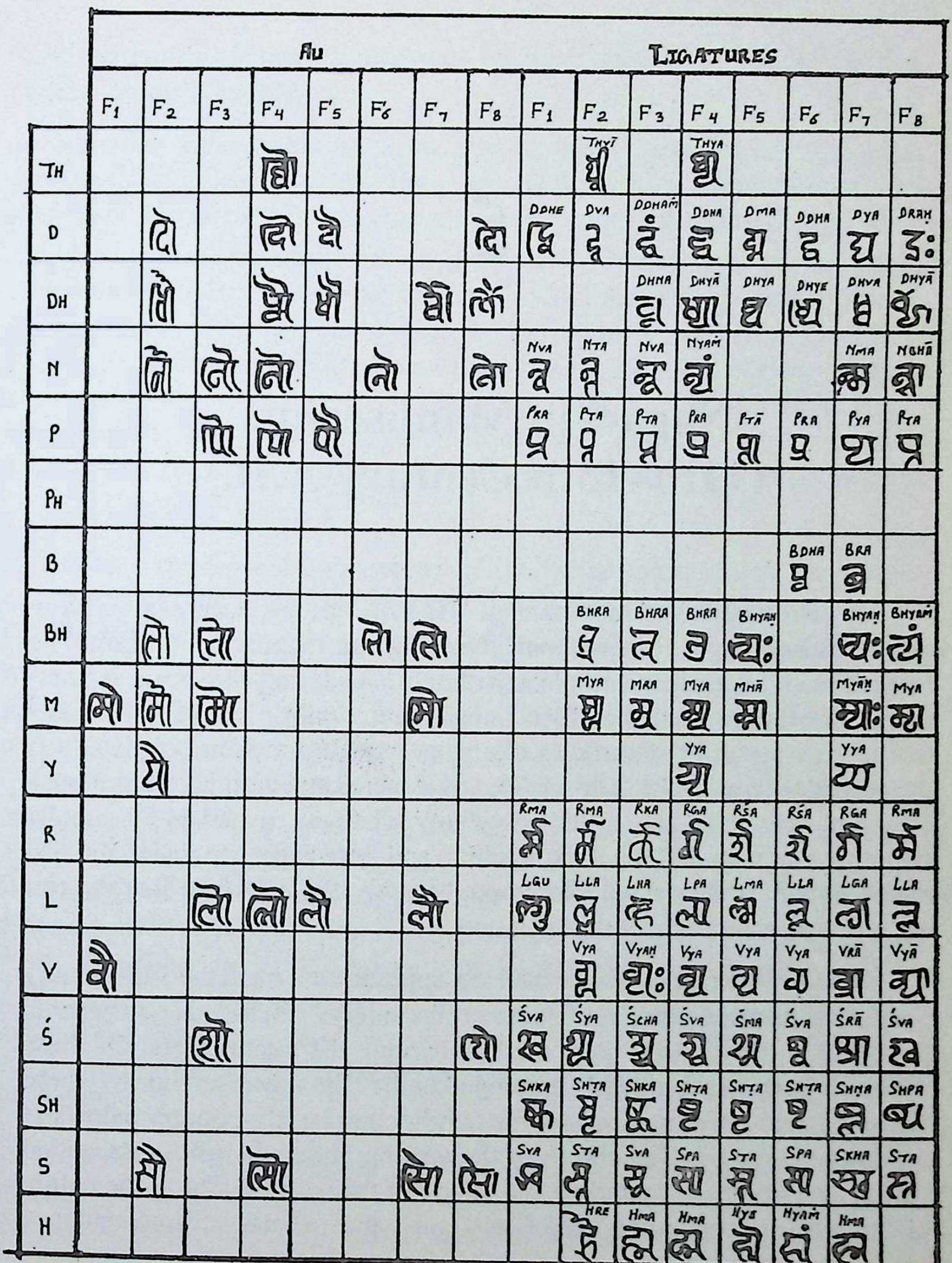
T
TPA TMA TNA TMA TSA TMA TMA TPA


Au
Ligatures
F1 F2 F3 F4 F5 F6 F7 F8
F1 F2 F3 F4 F5 F6 F7 F8
TH
THYĪ THYA
D
DDHE DVA DDHAṀ DDHA DMA DDHA DYA DRAḤ
DH
DHNA DHYĀ DHYA DHYE DHVA DHYĀ
N
NVA NTA NVA NYAṀ NMA NGHĀ
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PRA PTA PTA PRA PTĀ PRA PYA PTA
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BHRA BHRA BHRA BHYAḤ BHYAḤ BHYAṀ
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Y
YYA YYA
R
RMA RMA RKA RGA RŚA RŚA RGA RMA
L
LGU LLA LHA LPA LMA LLA LGA LLA
V
VYA VYAḤ VYA VYA VYA VRĀ VYĀ
Ś
ŚVA ŚYA ŚCHA ŚVA ŚMA ŚVA ŚRĀ ŚVA
SH
SHKA SHṬA SHKA SHṬA SHṬA SHṬA SHṆA SHPA
S
SVA STA SVA SPA STA SPA SKHA STA
H
HRE HMA HMA HYE HYAṀ HMA

5

Nāgarī in Manuscripts (11th–13th Century A.D.)

The development of monumental Nāgarī script has been dealt with in the preceding pages, but without involving the manuscript-Nāgarī. The subject would remain incomplete without considering that area. It is attested from the description of Tiruvālaṅgāḍu inscription,[1] and Kurud plates,[2] that engraving on hard surfaces like stone, metal, terracotta objects, was the secondary use of the writing. So, any generalisation on account of such engravings can have only a limited validity. The basic materials for popular writing were palm-leaf, birch-bark, cloth, and later paper, on which the real palaeographic studies should be based, because it is only here that the real and original hand of the writer is found.

John Guy refers that "Paper made its appearance around the 12th century but did not displace palm-leaf until the 14th century."[3] Before that, in general, palm-leaf and birch-bark were used for writing the manuscripts. Of these the birch-bark was frequently employed in the Himalayan territories where the birch trees grew, naturally while in other parts of the country palm-leaf was more common. The choice of the writing materials mainly depended on the availability of materials and nature of the work. So far as the nature of the work is concerned books, accounts, and ordinary correspondence were written on perishable materials whereas important documents were incised on durable objects.

As regards the antiquity, a Bauddha tradition appraises of writing the canon on palm-leaves at the first Council held soon after the death of Buddha.[4] The Buddhist *Jātakas* also refer to *paṇṇa* (*parṇa*, leaf) as a popular writing material,[5] which presumably represented palm-leaves. Hiuen-Tsiang (first half of the 7th Cent. A.D.) mentioned general use of palm-leaf as a writing material throughout the country.[6] In the 11th century, Al-Beruni also noticed that, "The Hindus have in the south of their country a slender tree like the date and cocoa-nut- palms, bearing edible fruits and leaves of the length one yard and as broad as three fingers one put besides the other. They call these leaves *tārī* (*tāla* or *tāṛ=Borassus flabelli formis*), and write on them."[7]

Besides literary evidence, some of the earlier manuscripts have been discovered outside India. For example, the Horizui plam-leaf manuscript of the *Skanda-purāṇa* now kept in the Darbar Library at Kathamandu (Nepal) belongs to the 7th century A.D.[8] Some fragments of Godfrew collection from Kashgar belongs at least to the 4th century A.D., as attested by palaeography and so shown by Hoernle.[9] The Khotan copy of the *Prākṛit Dhammapad* is the earliest known birch-bark manuscript, belonging as it does to about the 2nd or 3rd century A.D.[10] But, despite this evidence for the early existence of the palm-leaf or birch-bark manuscript, no specimen has survived in India, due to several destructive agencies, negligent preservation, and climatic conditions, which can be dated definitely prior to the 10th century A.D. According to R. B. Pandey, "It should be observed that the early manuscripts on palm-leaves are found mostly in the cold and dry countries and parts of India. No manuscript of a date earlier than the fifteenth century A.D. is found in the south due to the hot and humid climate of that part of India."[11]

In daily use leaves in their natural form were used; while for writing out the important works the leaves were specially "prepared". They were first dried, then soaked or boiled in water for a considerable length of time and again dried. The dried leaves were rubbed with conch, or cowrie-shells, or a smooth piece of stone and finally cut into folios of equal size. According to the length of folio, the writer or scriber divided it into two or three columns separated by narrow vertical margins. Generally, the external sides of the first and the last folios were left blank.

The earliest available manuscripts, in general, were written by two-sects —Bauddha and Jaina. The Buddhist tradition was prevalent in eastern India, chiefly in the provinces of Bihar and Bengal; while the Jaina tradition was widely spread in western India. Several religious complexes of these groups were established where among other things the task of copying and illustrating the manuscript was a part of the monastic activity. During the 12th century, the Muslim invaders razed to the ground and burnt down many religious and monastic establishments in U.P., Bihar and Bengal. As a consequence, the art of Buddhist manuscript illustration came to an abrupt end in Eastern India. The Jain tradition in Western India, however, escaped such misfortune and remained to develop in the subsequent centuries without any significant interruption.

The alphabet employed in the manuscripts of these two sects is Nāgarī. The manuscripts generally were written in North India, with pen and ink, while in the South the letters were incised on the leaves with a sharp-pointed needle and were made black by besmearing ink on the writing. As in the inscriptions so also in manuscripts, the Nāgarī unravels a process of development into the Bengālī script in Bihar and Bengal; and in Western India, a variant of Nāgarī, termed Jain-Nāgarī.

In the study of manuscript-Nāgarī one confronts some problems such as determining the provenance, date, etc. Manuscript writing was then a universal tradition. Document writers from time to time transcribed from older manuscripts in which, optionally, the same original date is repeated in the later copies. The later manuscript reveals a more advanced form of the alphabet on the basis of which the earlier may be discriminated. However, it was not impossible that the script of the same period shows different stages of development in the different geographical distributions. In these conditions it is not easy to sort out the alphabets of manuscripts region and period-wise. One more problem confronts us with ancient manuscripts is their being written on palm-leaves or birch-bark. These are easily perishable materials, for which reason preservers generally do not provide for proper observations.

The manuscripts written in Nāgarī have come in a good number. But I am not able here to particularize all the characteristics, which needs a volume by itself. For our present purpose only some manuscripts have been selected for illustration and analytical elaborations. A comparative study of the letter forms in the manuscripts with the forms known from the inscriptions is also intended.

For the sake of palaeographic presentation the following published manuscripts have been selected:

1. Buddhist palm-leaf manuscripts (11th century A.D.).
2. Oghniryukti palm-leaf manuscript of A.D. 1060 (now preserved in the collection of the Jaina Trust, Jaisalmer).
3. Sri Bhagavatīsūtra palm-leaf manuscript of A.D. 1062 (written at Stambhatīrtha, Cambay).
4. Palm-leaf manuscript of A.D. 1118 (Jaina Trust, Jaisalmer).
5. Sārdha-śataka palm-leaf manuscript (*c.* A.D. 1125-50, Jaina Trust).
6. Karmastavaṭīkā plam-leaf manuscript of A.D. 1122 (BORI, Poona).
7. Jaina palm-leaf manuscript (c. 1275-1300, Jaina Trust).
8. Ṛisabhadevacharita of A.D. 1232, and
9. Mahāvīracharita of A.D. 1237 (Pāṭaṇ).

These manuscripts are arranged under eight groups according to period and region for analytical study of the palaeography.

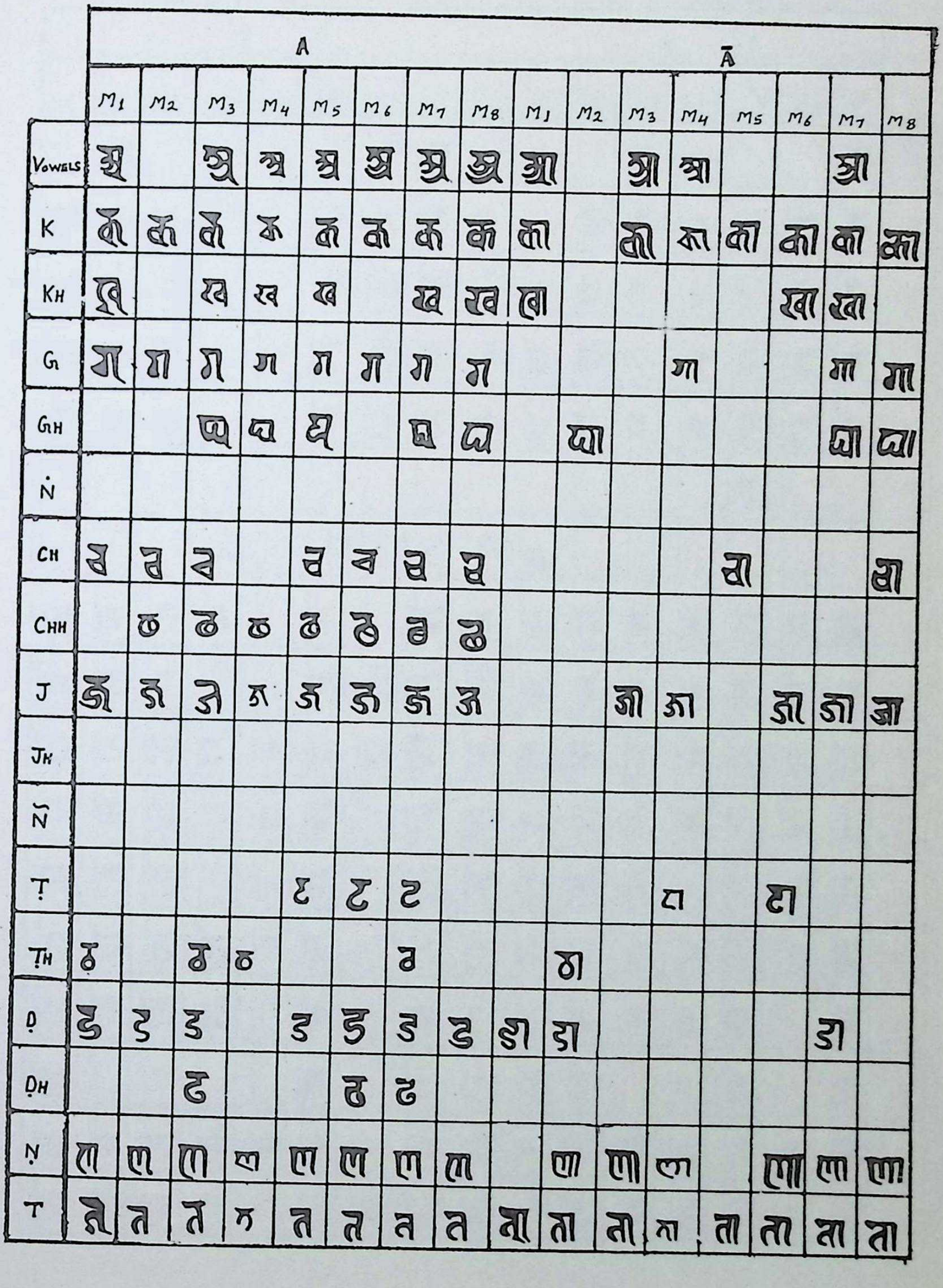
Eleventh Century

Table M_1 is derived from the illustrated Buddhist palm-leaf manuscripts of 11th century A.D. In comparing the alphabet in inscriptions, we observe, however, that it resembles the Bodh-Gayā inscription of Jayachchandra of the last decade of 12th century A.D. (Plate 121 - 144 , Table E_1). The bold notch-wedged head-mark and oblique edged form of the letters denote that the folios were written with a broad-edged pen.

As for the alphabet, most of the letters and medial signs attain their corresponding Nāgarī counterparts. Only initial *i*, *kha*, *tha*, *dha*, *pa*, *śa* and *sha* with medials *u* and *e* represent some distinguishing features from the usual form of Nāgarī. *I* occurs in peculiar roofed variety in which two vertical strokes falling from the upper horizontal line with an additional leftward curve in left stroke and in the lower two circles left one generally has a tail. In *kha*, left limb retains foot-marked shape in the place of developed tail. Lower curve of *tha* is slanted. The upper portion of *dha* is marked by blotted shape as well as with developed horn. *Pa* and *sha* bend their left arm as in Bengālī. *Śa* occurs in peculiar looped variety as appears in Bodh-Gayā inscription of Jayachchandra (Plate 122, Table E_1). In the formation of medials *u* and *e*; local forms of wedged vertical and left stroke, which have seen in Bodh-Gayā inscription, are also present here.

Table M_2 is taken from the *Oghaniryukti* palm-leaf manuscript of A.D. 1060 (now in the collection of the Jaina Trust, Jaisalmer). The folios of the manuscript were written with a reed pen. Like inscriptions of the period, this manuscript also furnishes horizontally placed left notched form of *gha*, developing form of *cha*, and hornless *dha*. The peculiarity is marked in double looped *chha*, which with some differences became the common feature of Jaina-Nāgarī. Lower leftward prolongation in *ja* is shortened. *Bha* shows transitional phase with dropping left limb as in inscriptions. Other letters resemble the form of modern Nāgarī. Medial signs and ligatures also are of Nāgarī type and do not furnish any remarkable noteworthy feature except wedged vertical form of medial *u* which may be due to the eastern influence.

Table M_3 is derived from *Sri Bhagavatīsūtra* palm-leaf manuscript of A.D. 1062 (written at Stambhatīrtha, modern Cambay). Here we find peculiarities in some letters. The horizontal and vertical joining strokes


A
Ā
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M1
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M8
Vowels
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KH
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GH
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CH
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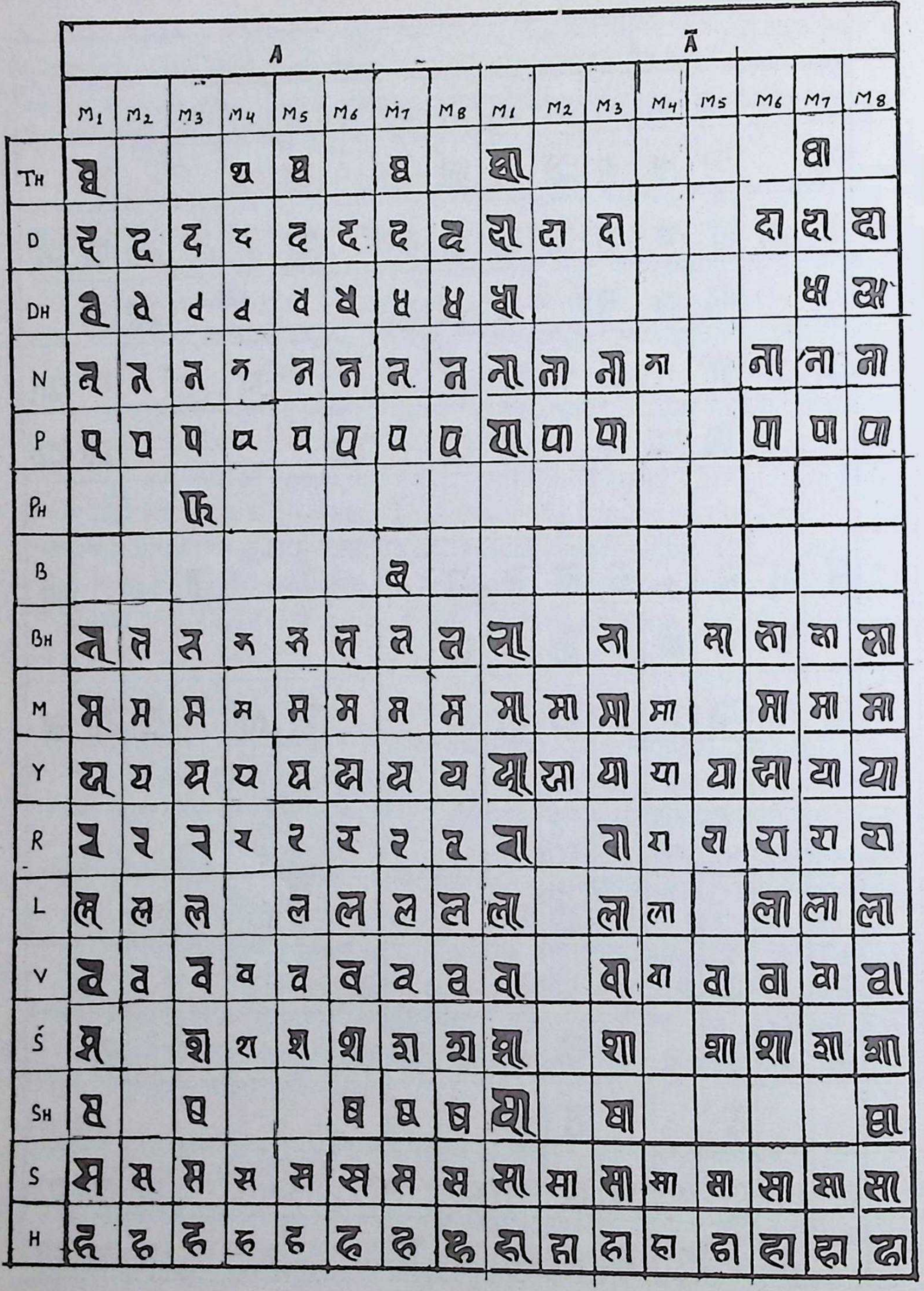
T

PLATE 164

11th-13th CENTURY A.D.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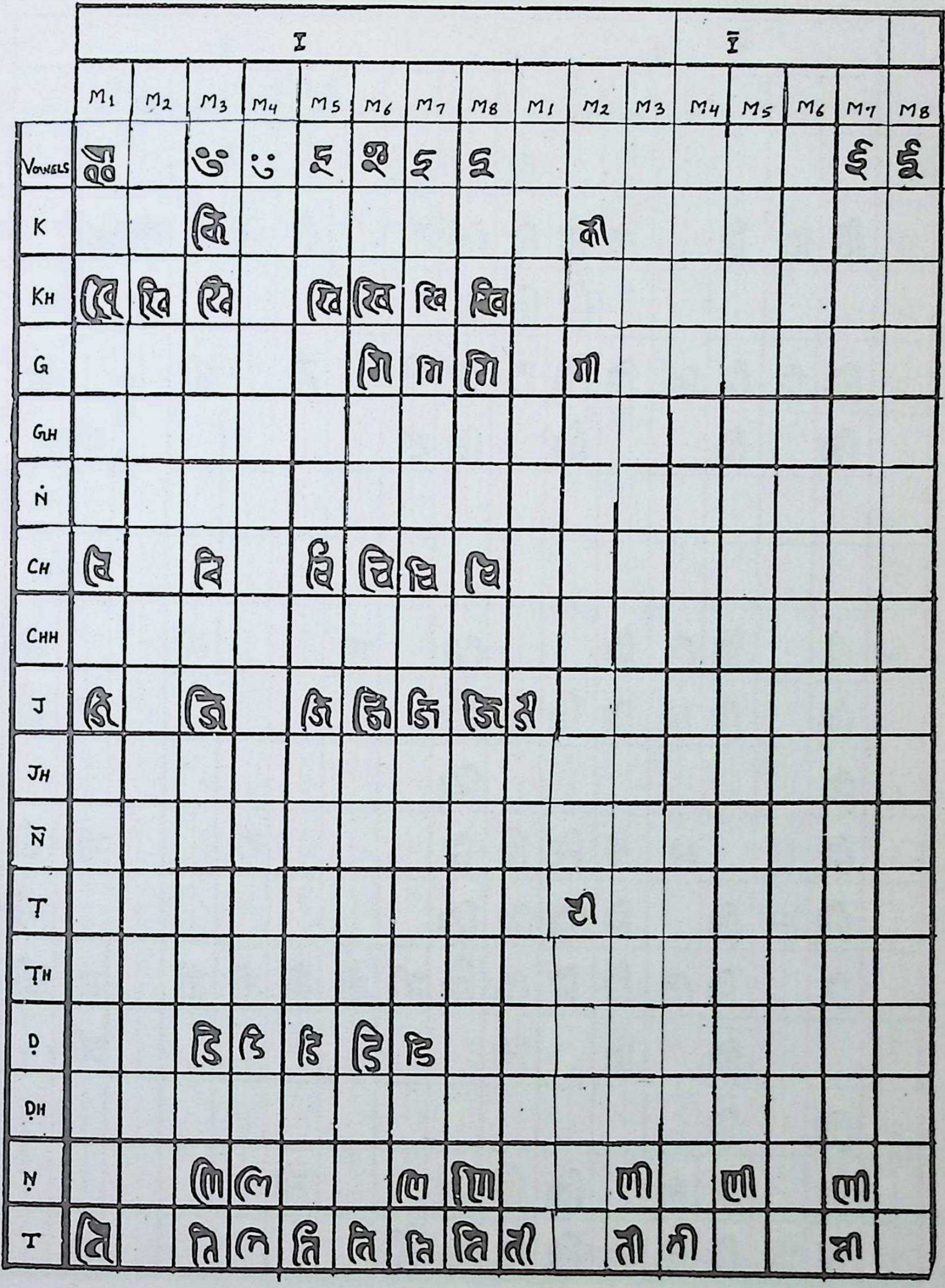
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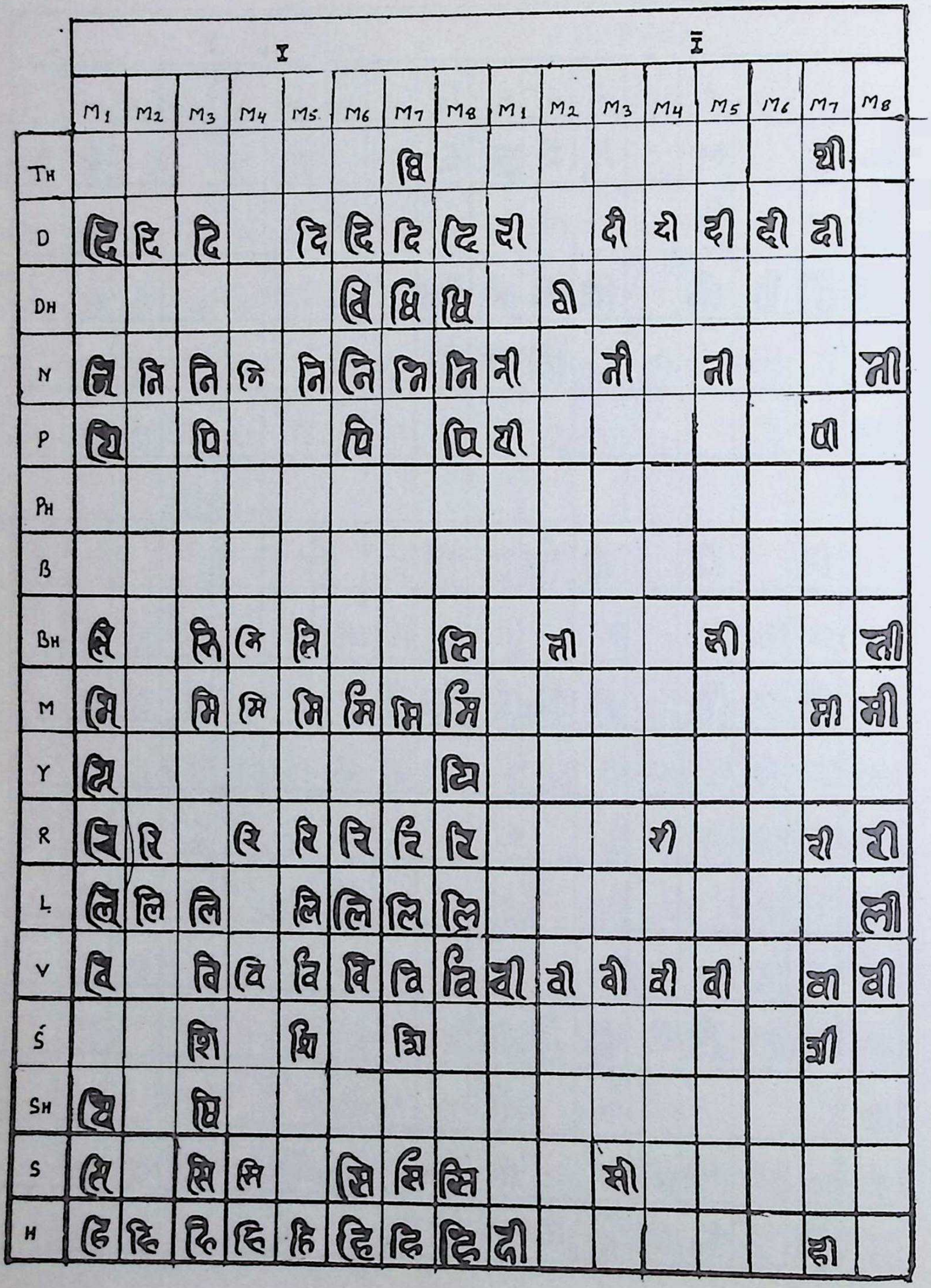
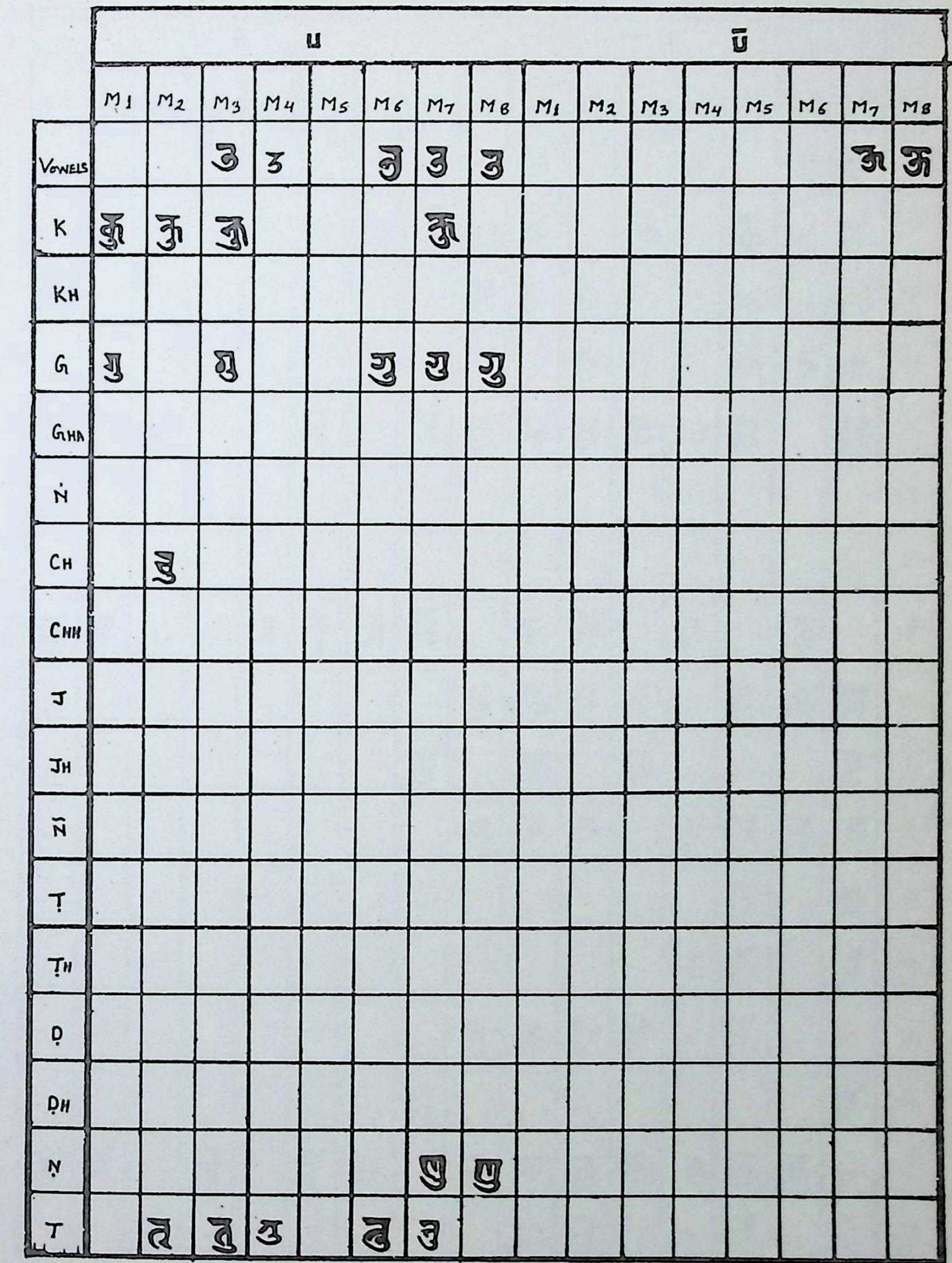


	I								Ī							
	M1	M2	M3	M4	M5	M6	M7	M8	M1	M2	M3	M4	M5	M6	M7	M8
TH							थि								थी	
D	दि	दि	दि		दि	दि	दि	दि	दी		दी	दी	दी	दी	दी	
DH						धि	धि	धि		धी						
N	नि	नि	नि	नि	नि	नि	नि	नि	नी		नी		नी			नी
P	पि		पि			पि		पि	पी						पी	
PH																
B																
BH	भि		भि	भि	भि			भि		भी			भी			भी
M	मि		मि	मि	मि	मि	मि	मि							मी	मी
Y	यि							यि								
R	रि	रि		रि	रि	रि	रि	रि				री			री	री
L	लि	लि	लि		लि	लि	लि	लि								ली
V	वि		वि	वि	वि	वि	वि	वि	वी	वी	वी	वी	वी		वी	वी
Ś			शि		शि		शि								शी	
SH	षि		षि													
S	सि		सि	सि		सि	सि	सि			सी					
H	हि	हि	हि	हि	हि	हि	हि	हि	ही						ही	



	u								ū							
	M1	M2	M3	M4	M5	M6	M7	M8	M1	M2	M3	M4	M5	M6	M7	M8
VOWELS			उ	उ		उ	उ	उ							ऊ	ऊ
K	कु	कु	कु				कु									
KH																
G	गु		गु			गु	गु	गु								
GHA																
Ṅ																
CH		चु														
CHH																
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ḌH																
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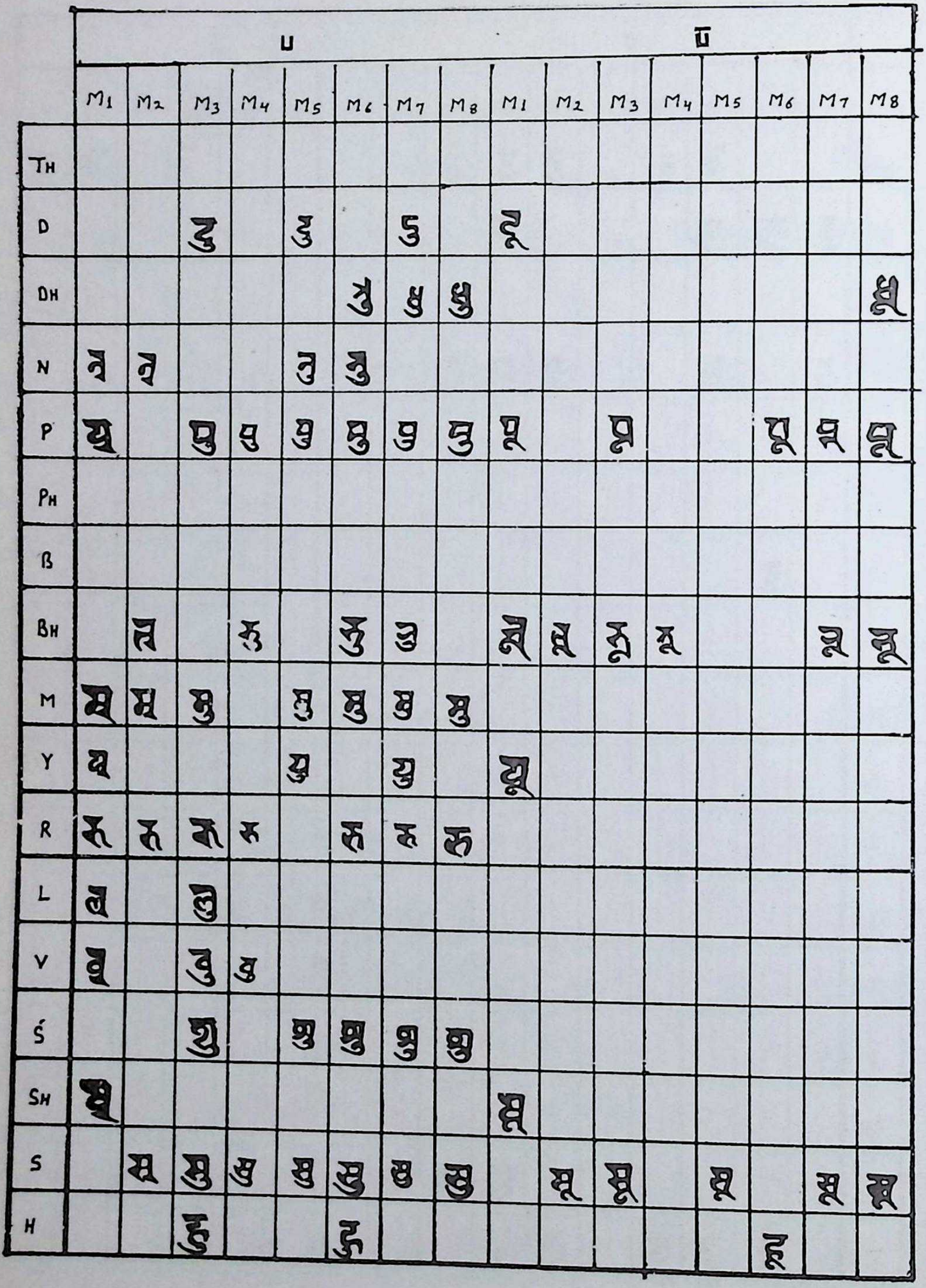
11th-13th CENTURY A.D. PLATE 168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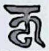
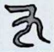
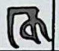
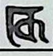
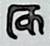
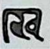
	ṚI								E							
	M1	M2	M3	M4	M5	M6	M7	M8	M1	M2	M3	M4	M5	M6	M7	M8
VOWELS																
K																
KH																
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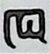
GH																
Ṅ																
CH																
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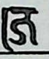
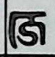
J																
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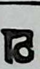
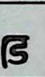
ṬH																
Ḍ																
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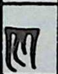
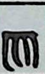
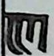
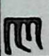
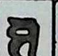
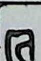
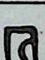
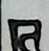
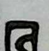
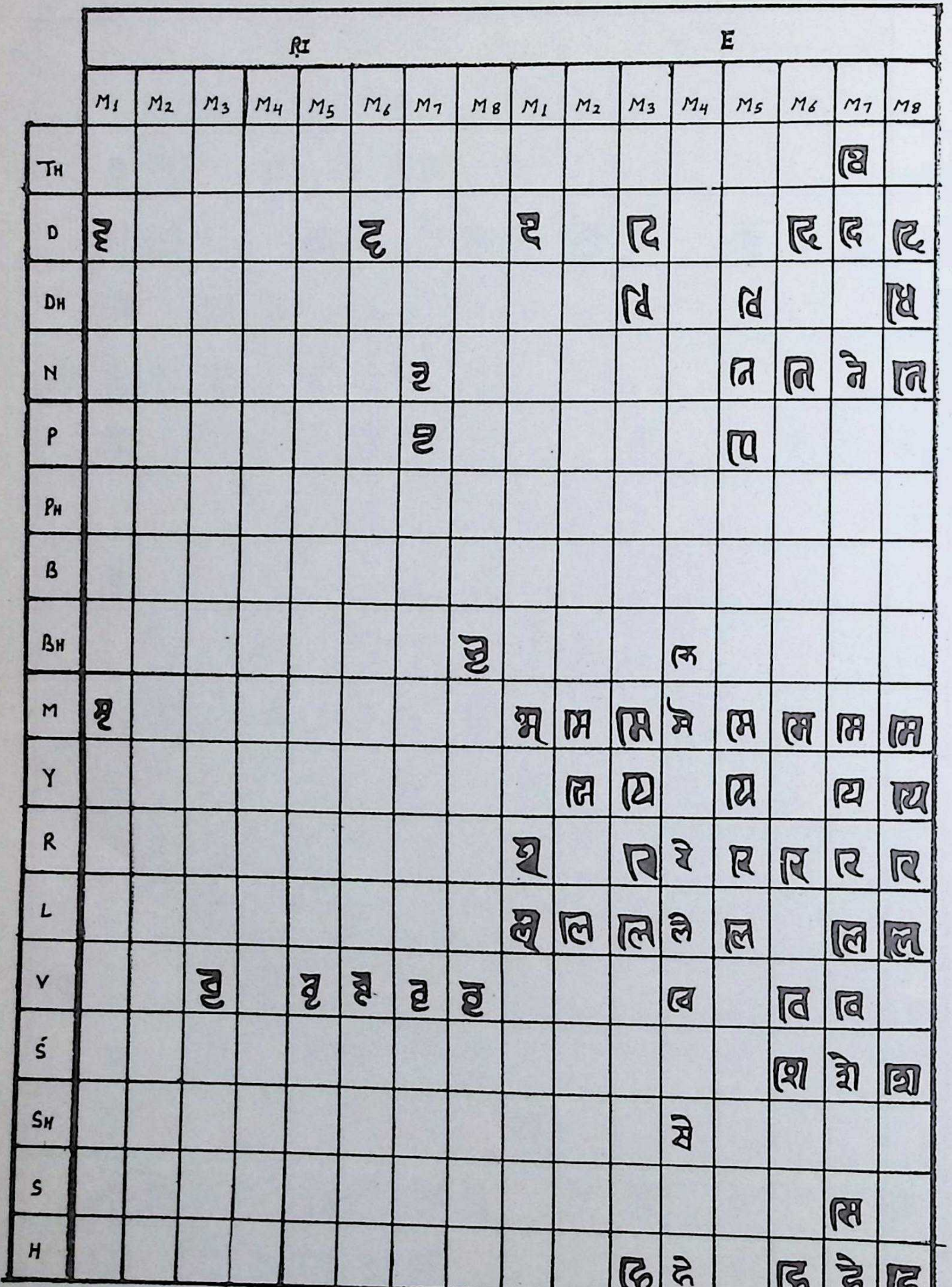
Ṇ																
T																


ṚI
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with left curve in *a* and *ā* are shortened or disappear. *I* retains its old double dots and one curve shape. In *u*, a knob appears at the upper end of lower curve which becomes the common variety of Jaina-Nāgarī. Rare *au* is found in a peculiar variety which looks like headless initial *a* with an additional upright stroke at the left curve.

Among consonants *ja* occurs in modern Nāgarī shape, while the inscriptions of 12th century A.D. generally show the transitional phase of the letter. The diverging features from the usual Nāgarī are marked in *chha* and *ṭha*. Both represent their shape as in Jaina-Nāgarī. *Gha* still retains its left notched shape horizontally. *Dha* is yet to develop its upper oblique. *Pha* is of modern Nāgarī variety with only the difference of crooked right appendage instead of modern curve. Here, the shape of *ya* is more angularized than in the inscriptions or in the manuscriptions of other regions. *Bha* retains its broader archaic shape. Other consonants occur in their matured Nāgarī shapes. Ligatures *ksha*, *chchha* and *jña* represent distinctive features as in Jaina-Nāgarī. Subscript *tha* retains its oval shape.

Twelfth Century

The development in alphabets during the 12th century A.D. is illustrated in Table M_4 which is derived from the palm-leaf manuscript of A.D. 1118 (now preserved in the collection of the Jaina Trust, Jaisalmer). Most of the letters and medial signs are found in their modern Nāgarī shapes. Even the left portion of *gha* shows a process of vertically placed notched form. But at the same time archaism is retained in some letters such as *ta*, *na* and *bha* with their broader or cursive form. *Dha* is yet to develop its upper horn like shape. *I* still retains its old dots and curved shape. In ligatures, *ksha* draws the attention which is formed by adding *ñ* like shape to the left of the letter *ka*.

Table M_5 is derived from the Sārdha-śataka palm-leaf manuscript (*c*. A.D. 1125-50), now preserved in the collection of Jaina Trust, Jaisalmer). We come across developed form of Nāgarī alphabet in these folios. The new innovation which occurs here is the shape of initial *i* which resembles the letter in modern Nāgarī only with the difference of lower detached hook, while in the inscriptions of the period it is in old or transitional shape. *Chha* and *ja* furnish peculiar Jaina-Nāgarī shape. *Dha* develops an oblique stroke at its upper angle. Medial signs and ligatures are as usual in the inscriptions.

Table M_6 is taken from the Karmastavaṭīkā palm-leaf manuscript (by Govinda Gani dated A.D. 1122). This represents a typical example of Jaina-Nāgarī. Initial *u* and *o* show Jaina-Nāgarī features. In both the letters upper end of lower curve are in broader shape. As for *o*, it is formed by adding an upright stroke to the form of initial *u*. Among other initial vowels *a* represents the same feature as in the *Śri Bhagavatīsūtra* manuscript (Table M_3) of the preceding period. *I* shows transitional phase by adding two circles with an angular mark and turning lower curve to the right. Among consonants left portion of *cha* is in triangular shape in the place of developed one. *Chha* and *ja* are found in their peculiar Jaina-Nāgarī shape. *Dha* preserves its upper oblique stroke. Other letters are in developed and usual Nāgarī shapes. Among ligatures, a peculiar variety of medial *u* is found in *npu* and *pyu*. Here the *u* medial sign has been attached in the middle of the vertical in place of the lower end. Such type of typical symbols are occasionally found only in Jaina-manuscripts. Other signs are as usual.

Thirteenth Century

Table M_7 is derived from Jaina palm-leaf manuscript (c. 1275-1300, now preserved in the collection of the Jaina Trust, Jaisalmer). As for initial vowels, the advanced and modern looking forms of *a*, *ā*, *i*, *ī*, *u*, *ū* and *e* are found in these folios in which top of *i* is flattened and curve of *u* is knobbed like peculiar Jaina-Nāgarī. In the manuscripts lower leftward stroke in *a* is retained while in inscriptions generally it has disappeared. As for consonants, left notched shape of *gha* is still horizontally placed. *Chha*, *ja*, *ṭha* and *bha* diverge from the usual Nāgarī and furnish peculiar shape of Jaina-Nāgarī. *Ba* is denoted by separate and modern looking sign. Other letters have also attained their modern Nāgarī counterparts. Medials are as usual in that period. In ligatures, *ksha*, *Chchha*, and *jña* represent their peculiar Jaina-Nāgarī character.

Table M_8 is taken from the palm-leaf manuscripts of *Ṛisabhadeva-charitra* (mss. dated A.D. 1232) and *Mahāvīracharitra* (by Hemachandra Sūri, mss. dated A.D. 1237). These manuscripts are preserved now in Saṅghavīnā Bhaṇḍār Pāṭaṇ. The folios of these manuscripts are written with a broad edged pen, peculiar handling of which makes for a distinctive appearance of the alphabet. As far as development of individual letters is concerned except *gha*, *cha* and *bha*, all of them have attained their Nāgarī counterparts in which *chha*, *ja* and *ṭha* are denoted by their peculiar Jaina-Nāgarī shapes. Optionally, the usual Nāgarī form of *ja* is also found in these folios. Among ligatures, jña is of modern looking variety. Medials *ā*, *i*, *ī*, *u*, *ū* and *ṛi* resemble with modern Nāgarī signs. Others, *e*, *ai*, *o* and *au* are represented by modern top-stroke signs along with the perpendicular mark of that period.

General Remarks

It is clear from the illustrations that the developments in a alphabet first take place in manuscripts and engraved forms follow the trait. At the same time it is also evident that for writing the conventional or royal works, a standard form of an alphabet was employed while in daily writing newer forms were emerging, due to continuous use, personal mannerisms, and several other reasons, as in modern times.

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References for Plates 163-174
(11th-13th Century)

Table	**Manuscript**	**Date in A.D.**	**Reference**
M_1	Buddhist palm-leaf	11th Century	*The World of Indian Miniatures*, Fig. 1, f. p., 40; *Indian Painting*, Figs. on pp. 81 & 85; *Panorama of Indian Painting*, Figs. b., pp. 10-11.
M_2	Oghaniryukti palm-leaf	1060	*Masterpieces of Jaina Painting*, p., 36, No. 3.
M_3	Sri Bhagavatīsūtra palm-leaf	1062	*Jaina Paintings*, vol. I, Pl. 5, Figs. 13-16.
M_4	Palm-leaf	1118	*Masterpieces of Jain Painting*, p., 28, No. 5.
M_5	Sārdhaśatak palm-leaf	*c.* 1125-50	*Masterpieces of Jain Painting*, p., 36, No. 4.
M_6	Karmastavaṭīkā palm-leaf	1112	*ABORI*, XXXVI, f. p., 217, (leaf 145b).
M_7	Palm-leaf	*c.* 1275-1300	*Masterpieces of Jain Painting*, pp. 40-41, No. 19.

M_8	Ṛisabhadevacharitra	1232	*Jain Paintings*, I, Pl. 12, Figs. 34-36.
	Mahāviracharitra	1237	*Jain Paintings*, I, Pl. 16, Figs. 51-54.

6

Numerals and Other Signs

Signs for Numerals

Like alphabets, the Indian numeral also reveals a history of gradual evolution. In ancient times, before the 10th century A.D. numeral notations were denoted in two ways - letter numerals and numerical figures of the decimal system. In letter numerals separate signs are used for the units, tens, hundreds and thousands. Other composite numbers are represented by the combination of units with tens, hundreds and thousands. This type of notation was employed exclusively up to the later part of the 6th century A.D. and thereafter sporadically survived alongside the decimal system till the 10th century A.D. Very useful researches on the letter-numerals have been done by E. Thomas,[1] E. Clive Bayley,[2] Bhau Daji,[3] H.R. Kapadia,[4] Bhagawanlal Indraji,[5] G. Bühler,[6] G.S. Ojha,[7] Awadhesh Narain Singh,[8] Sobhana Laxaman Gokhale,[9] and recently Om Prakash Lal Srıvastava.[10]

The modern system of using nine unit figures and zero for all purposes of notation and calculation, arranged in decimal order seems to be of a later period. To the best of our knowledge, the earliest epigraphic instance of the use of the decimal notation is the Gūrjjara inscriptions from Sāṅkheḍā of Chedi year 346 (A.D. 595).[11] The object of the present chapter is not to deal with the typology, old and new, of the numerals but to trace the history of evolution of Nāgarī numerals. For the present purpose I have prepared three numerical Plates out of which Plate 175 (Tables N_1 to N_{15}) is derived from the inscriptions of the 6th-8th centuries, Plate 176 (Tables N_{16} to N_{31}) from the 9th-10th centuries and Plate 177 (Tables N_{32} to N_{47}) from the period between the 11th and the 13th centuries.

Here I do not wish to enter into the controversy of numerals being evolved with the letter forms or independent symbols, but have taken the general resemblance of the numeral signs with the letters of the period.

Sign for Zero

The sign of zero, in Teruṇḍia Plate of Śubhakar: A.D. 704 (Table N_3) is represented as a dot. It is evident from literary sources that the sign of zero was drawn by a dot in the earlier period.[12] Tables N_4 and N_5, derived from Purushottampur and Daultābād plates, show an open circle or hook like sign. From the 9th century, it becomes circular in shape as in modern times.

Sign for One

The numeral *1* is denoted by a horizontally placed stroke (Pl. 175, Tables N_2 & N_{15}), or curve (Table N_7) and continues till 8th century A.D. From the 9th century, curve is vertically drawn. In further developmental stage a hook (Table N_{16}), a knob (Table N_{26}), or a small circle (Tables N_{27}, N_{30}, N_{31}) is added to the top of it. These forms are continued till 13th century. Out of them, small circular variety is accepted in modern Nāgarī.

Sign for Two

Two parallel horizontal lines occur for the numeral *2* in Tipperāh Grant of Lokanāth (Table N_2). In the next developmental stage (Table N_6), both horizontal stroke are joined by a third cursive stroke, This numeral notation attains modern shape during the 9th century A.D. in which a slanting stroke is attached to the upper half-circle.

Sign for Three

The Dadhimatī-mātā inscription of the time of Dhruhlaṇa (A.D. 608; Table N_9) indicates the use of old form of numeral notation *3* which is formed with three parallel horizontal lines. In the first developmental stage (Table N_{10}) right tip of the upper two bars slant to meet with the lower bar, which is extended to the right. The further developmental stage (Table N_{11}) shows a form in which the right tip of both upper bars became cursive by which three limbs joined with each other. Finally, from the 9th century, upper two lines are shortened and form almost a double curved shape and a slanted tail is attached at the lower extremity. This form is retained in Nāgarī.

Sign for Four

Two different types of numeral signs are found for *4* till the 9th century A.D. A sign like letter *ka* was the shape for four in the Mauryan period. Later on, an upward open curve was added to the left of it which looked like the ligature *pka*. In the 7th century curve turns to open right and looks like ligature *ṭka* (Table N_9). The continuation of the letter numeral in the 9th century is marked by Javakheḍ plate of Amoghavarsha (A.D. 820; Table N_{28}) where it is formed with *ka* like shape with a stroke to the left of the head-mark. However, the Nāgarī form of this numeral is also noticed as early as the Dhinaki plate of Jāikadeva of A.D. 738?[13] (Table N_{13}). The modern form gains more currency from the 9th century.

Sign for Five

Several signs are employed for the numeral *5*. This notation is not shown in the Mauryan Brāhmī. From the time of the Kushāṇap till third century it is denoted by *a* like letter form. *Nā*, or *tṛi* like letter form is the common variety of it during the fourth-fifth centuries. Later on, *a* like form of it developed into *hu* like mark in the Kailan plate (Table N_1), *ha* like in Dighwā-Dubaulī plate (Table N_{24}). *Tṛi* like shape of it grew into the form of *Tyā* in Madhuban (M_8) and Barāh plates (N_{22}). In Tipperāh plate (Table N_2) it is denoted by a leftward hooked shape with an additional small stroke in the middle of the vertical line. In the Kusumā inscription

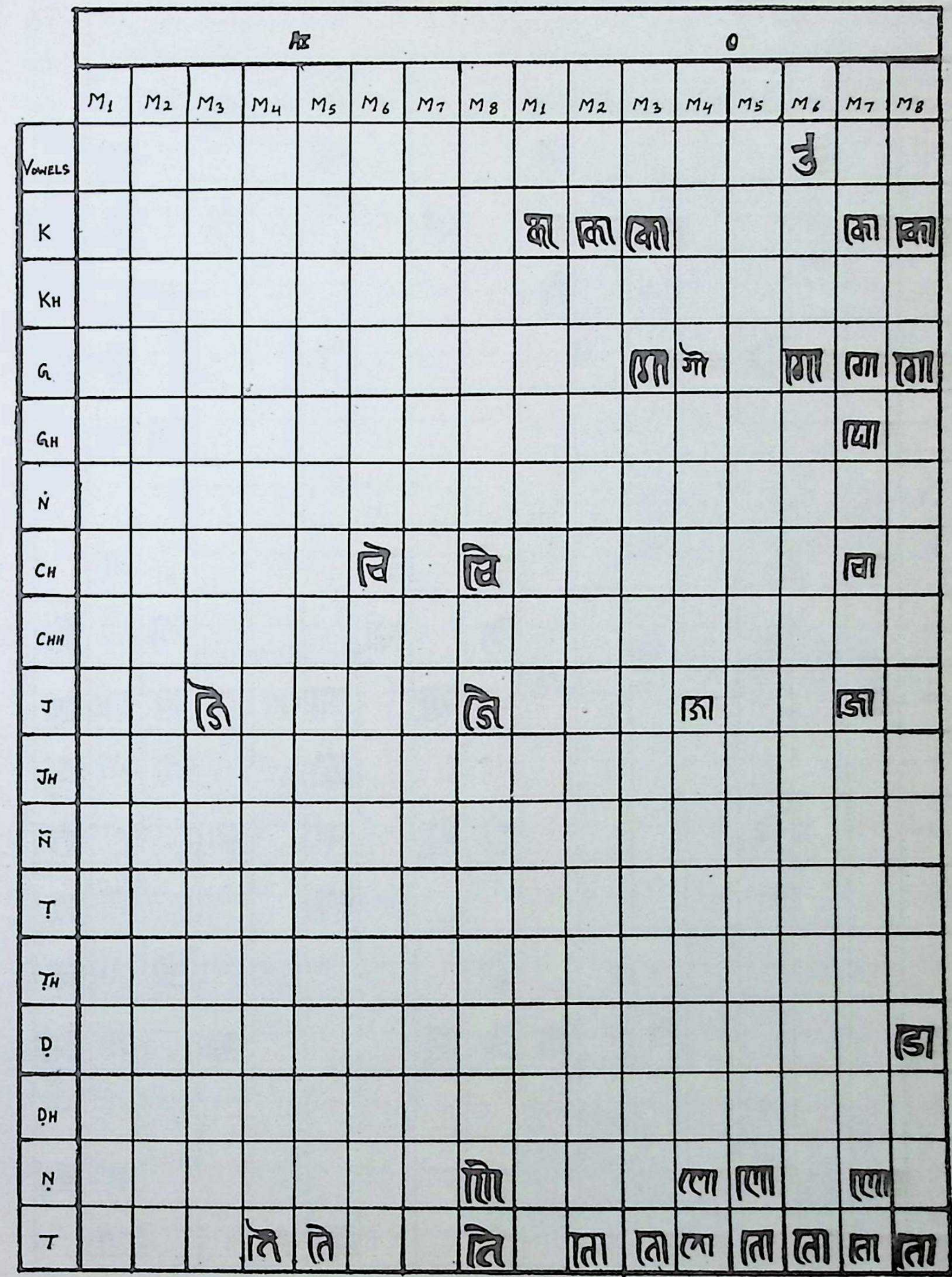
(N_{10}) it is represented as an upward hooked shape with a knob at the upper end. A righward hooked shape is employed for this sign in the Gayā epigraph of the time of Sultān Muizzudin (Table N_{33}). However, in general, this notation is denoted by the letter *ja*, where the head-mark disappears. Jodhpur inscription of Bāuk (A.D. 837; Table N_{21}) represents a transitional shape formed by an upward opened curve with notched left limb. The next developmental stage is marked by Jodhpur grant of Siṁharāja (A.D. 997; Table N_{27}), where the right limb forms a straight line; but left limb still is notched. Finally, the right limb became straight and the left one cursive (Tables N_{25}, N_{26}, N_{39}, N_{40}, N_{42}, N_{46}). From this form modern Nāgarī shape evolved in course of time.

Sign for Six

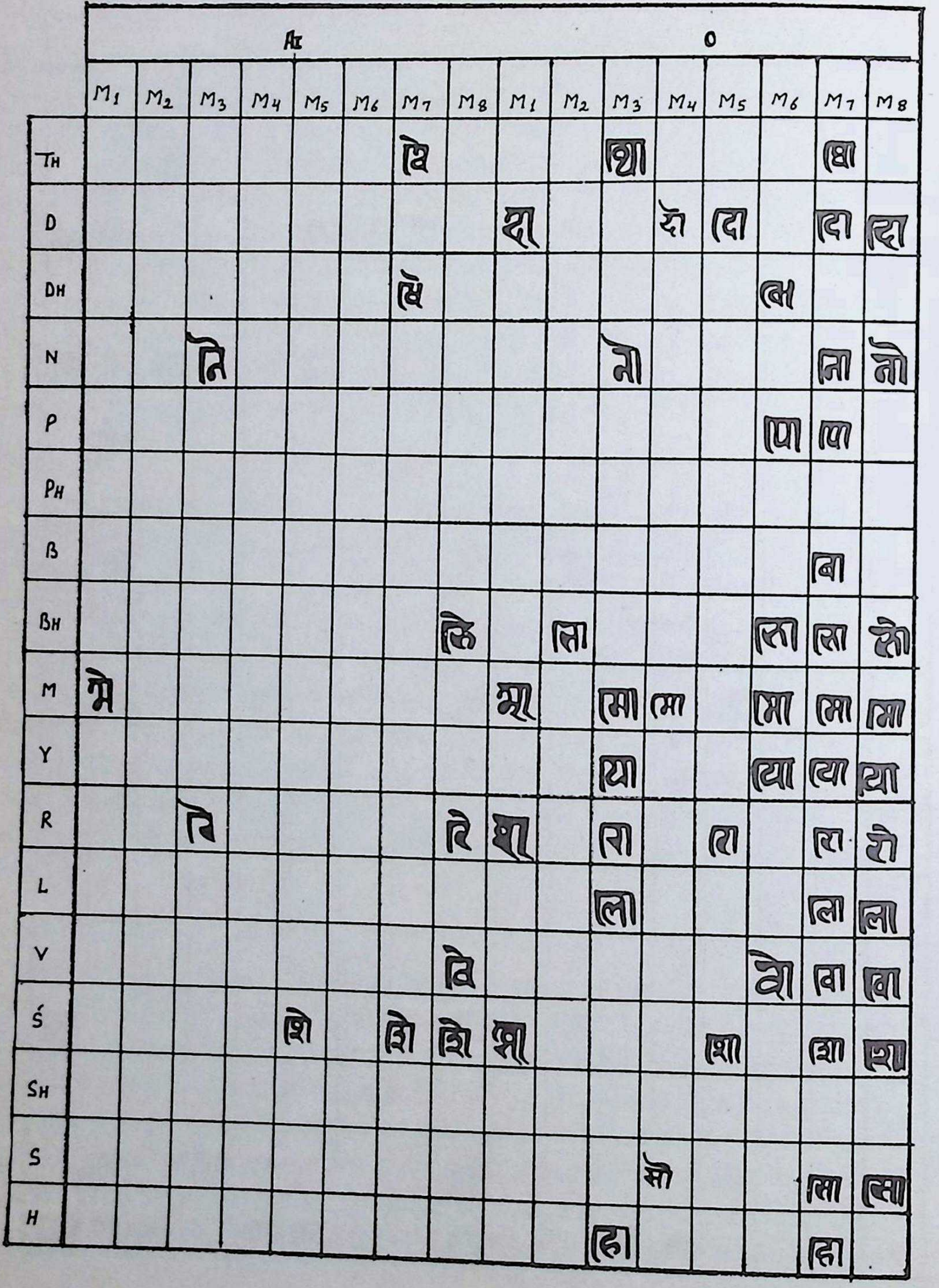
The earlier specimens frequently show the form of *ja* for the numeral notation *6*. Thereafter in Madhuban plate of Harsha (Table N_8) it is shown by the letter *da* or *drā*. Sāmangaḍh (Table N_{14}) and Chicācole (N_{18}) plates reveal a phase of developing the modern sign, represented as a curve with a slanted stroke. In further developmental stage (Table N_{23}) upper curve is turned to right and lower slanted stroke develops into a hook shape. Finally, both limbs of the vertical become cursive with a vertical tail (Tables N_{40} & N_{47}). However, this developed form continued in use from the 10th century. Alongwith the developed sign, peculiar headless *da* like letter-form of the numeral *6* is noticed even in the 11th century (Table N_{44}).

Sign for Seven

In tracing the development of Nāgarī numeral *7* we observe that it was shown by a downward curve in the earlier periods. In developing stages, the right limb of the curve extends downward (Table N_{14}), progressively turned to left in various degrees (N_{35}, N_{36}, N_{46}) and finally prolongs upwards (N_{37}, N_{42}). Side by side with these developed marks other forms are also noticed such as a leftward double curved shape like incipient mark of the numeral *3* (Tables N_{20} & N_{25}), a hooked shape with a notch in right limb and a head-line (Table N_{34}) and a double curved shape in



	Ai								O							
	M1	M2	M3	M4	M5	M6	M7	M8	M1	M2	M3	M4	M5	M6	M7	M8
VOWELS														ও		
K									কো	কো	কো				কো	কো
KH																
G											গো	গো		গো	গো	গো
GH															ঘো	
Ṅ																
CH						চৈ		চৈ							চো	
CHH																
J			জৈ					জৈ				জো			জো	
JH																
Ñ																
Ṭ																
ṬH																
Ḍ																ডো
ḌH																
Ṇ								ণৈ				ণো	ণো		ণো	
T				তৈ	তৈ			তৈ		তো	তো	তো	তো	তো	তো	তো


Ai
O
M1
M2
M3
M4
M5
M6
M7
M8
M1
M2
M3
M4
M5
M6
M7
M8
TH
D
DH
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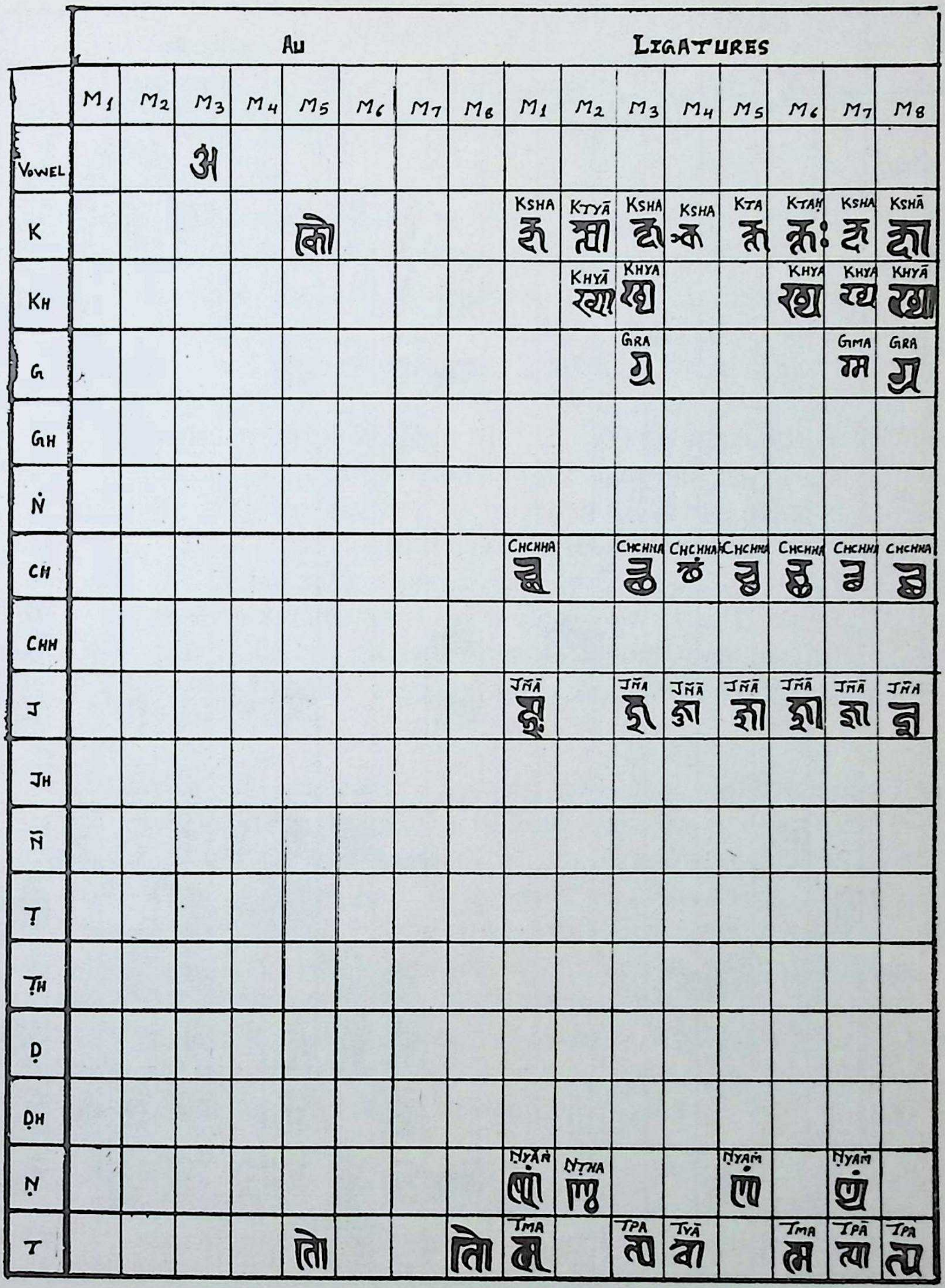
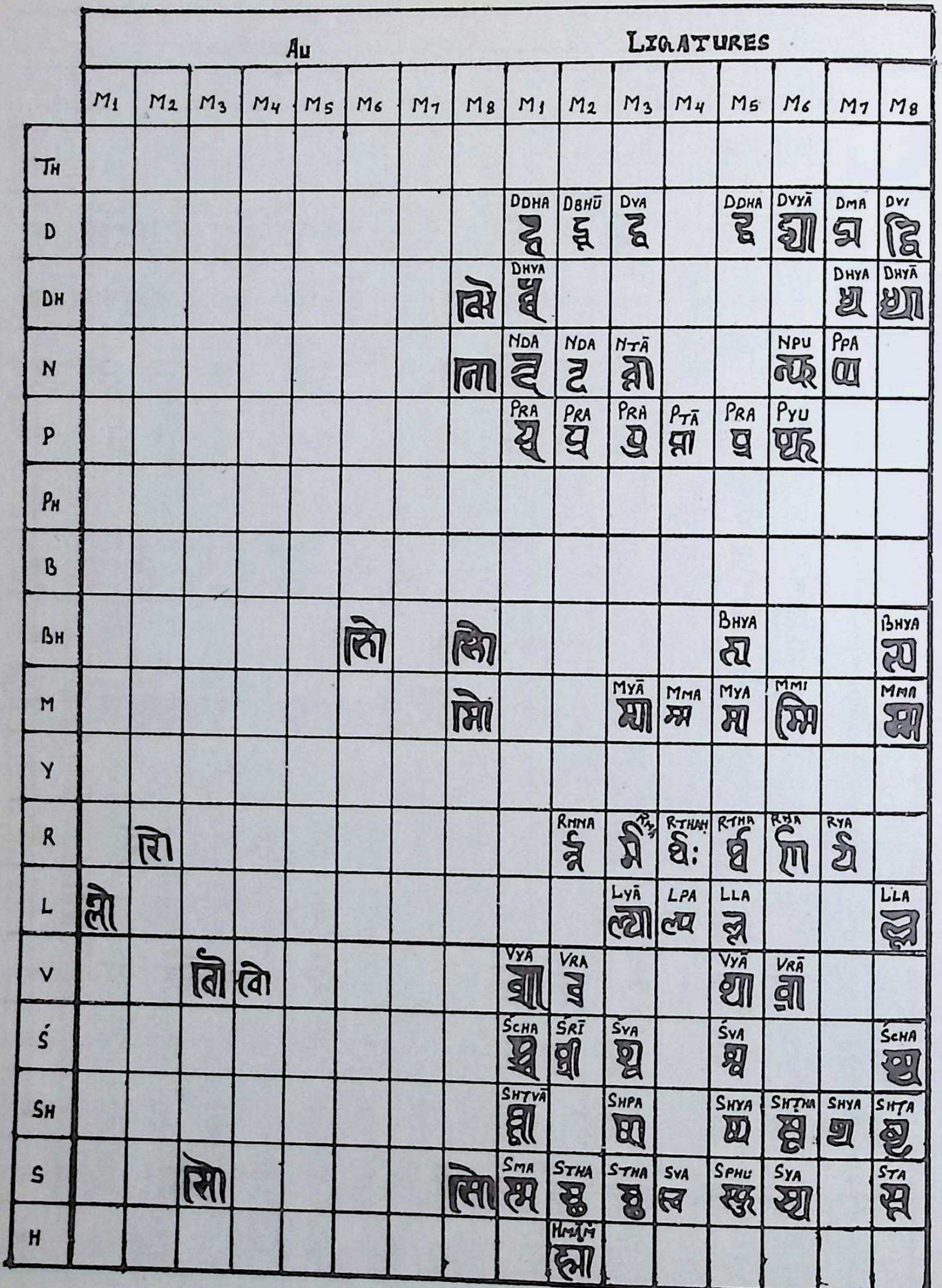


	AU								LIGATURES							
	M1	M2	M3	M4	M5	M6	M7	M8	M1	M2	M3	M4	M5	M6	M7	M8
VOWEL																
K									KSHA	KTYĀ	KSHA	KSHA	KTA	KTAḤ	KSHA	KSHĀ
KH										KHYĀ	KHYA			KHYA	KHYA	KHYĀ
G											GRA				GMA	GRA
GH																
Ṅ																
CH									CHCHHA		CHCHHA	CHCHHA	CHCHHA	CHCHHA	CHCHHA	CHCHHA
CHH																
J									JÑĀ		JÑA	JÑĀ	JÑĀ	JÑĀ	JÑĀ	JÑA
JH																
Ñ																
Ṭ																
ṬH																
Ḍ																
ḌH																
Ṇ									ṆYĀṀ	ṆṬHA			ṆYAṀ		ṆYAṀ	
T									TMA		TPA	TVĀ		TMA	TPĀ	TPA



	AU								LIGATURES							
	M1	M2	M3	M4	M5	M6	M7	M8	M1	M2	M3	M4	M5	M6	M7	M8
TH																
D									DDHA	DBHŪ	DVA		DDHA	DVYĀ	DMA	DVI
DH								धौ	DHYA						DHYA	DHYĀ
N								नौ	NDA	NDA	NTĀ			NPU	PPA	
P									PRA	PRA	PRA	PTĀ	PRA	PYU		
PH																
B																
BH						भौ		भौ					BHYA			BHYA
M								मौ			MYĀ	MMA	MYA	MMI		MMA
Y																
R		रौ								RNNA	RMI	RTHAḤ	RTHA	RMA	RYA	
L	लौ										LYĀ	LPA	LLA			LLA
V			वौ	वौ					VYĀ	VRA			VYĀ	VRĀ		
Ś									ŚCHA	ŚRĪ	ŚVA		ŚVA			ŚCHA
SH									SHṬVĀ		SHPA		SHYA	SHṬHA	SHYA	SHṬA
S			सौ					सौ	SMA	STHA	STHA	SVA	SPHU	SYA		STA
H										HMĀṂ						

which either upper curve to right and lower to left (Table N_{38}) or upper curve to left and lower to right (Tables N_{43} and N_{44}).

Sign for Eight

The numeral *8* is denoted by initial vowel *u* like letter in Bodh-Gayā inscription (Table N_5), *bha* like in Guhil grants (Table N_{12}), *da* like in Daultābād plate (Table N_{15}), *vra* like in Jodhpur inscription (Table N_{21}) and *hrā* like form in Bengāl Asiatic Society's plate (Table N_{24}). To trace the developmental stages of modern Nāgarī form, we find that it is represented as a rightward curve in Table N_4. In the next developmental stage the upper portion become flattened with a downward slanted stroke (Table N_{23}). Further, lower slant transforms into a rightward curve (Tables N_{37} & N_{39}). Finally, upper flat line protrudes to the left (Tables N_{35}, N_{40}). This shape is still employed in Nāgarī. As for other signs, one horizontal line with two falling strokes is the shape in Gujarāt (N_{28}) and Chinchni (N_{29}) plates, rightwards peculiar notched with curly extremity in Kūreṭha plate (Table N_{34}), leftward double curved shape in Ṭhāṇā plates (N_{44}) and leftward hooked shape in Bassein inscription (Table N_{45}).

Sign for Nine

The numeral *9* is represented by a leftward curve with notch in earlier period. Letter *ra* is the shape for it in Bodh Gayā inscription (Table N_5), *jya* in Nālandā (N_{16}) and Peṭṭasar Grant (N_{17}) and *u* in Bengāl Asiatic Society's Plate (Table N_{24}). In later period generally two signs are employed for this numeral: (i) leftward hooked shape with a circle at the upper end and (ii) double curved shape. Second shape furnished numeruous sub-varieties which can be best understood by the illustrations shown in Plates 176 & 177. Of these sub-varieties, Konī inscription (Table N_{37}) reveals developed features with both curves turning to right. From this shape modern Nāgarī form evolved in due course.

Sign for Ten

A separate sign is employed for the numeral notation *10*, in old specimens. The letter *ma* with its open mouth turned to right is the shape for ten in earlier stages. Progressively, the left loop mouth opened and upper arm of the right curve transforms into a straight vertical and shows different forms which look like *ṇṭa* and found in Tipperāh grant (Table N_2). A peculiar sign occurs in Chaṇḍeśvara plates (Table N_4). The *ya* like letter appears in the Maṅgarāon (Table N'_6) and Dadhimatī-mātā inscriptions (Table N_9). In Āhar (N_{23}) and Dighwā-Dubaulī plates (N_{24}) it is represented by *lṛi* like letter-form. From the 10th century decimal system becomes the regular feature where numeral one comes to the left of zero.

Sign for Twenty

The numeral *20* retains old *tha* like letter form in Tipperāh (Table N_2), Bānskherā (N_7) and Madhuban copper-plates (N_8).

Sign for Forty

Pta like letter-form is the shape of numeral *40* in the Guhil inscriptions (Table N_{12}).

Sign for Fifty

In all developmental stages *50* is indicated by a curve open to right as shown in Table N_{24} (Dighwā-Dubaulī plate).

Sign for Sixty

An angle with its apex downwards is the shape of *60* in earlier period which developed in due course and takes *pu* like letter form in the Bodh-Gayā inscription (Table N_5).

Sign for Seventy

In Kushāṇa period a cross-bar or *pna* like letter from is employed for *70* which developed into *ṅka* like mark in later period as shown in Table N_{17} (Peṭṭasar grant).

Sign for Eighty

The numeral *80* is denoted by a circle with a full breadth vertical line in the middle in earlier period. In Dadhimatī-mātā inscription flat line with two upright triangle is the shape of it. In the Bengāl Asiatic Society's plate (Table N_{24}) an upward open curved with inner bent extremities is the shape of the numeral.

Sign for Ninety

In earlier period *90* is indicated by a circle with cross mark in the middle. One horizontally slanted with three upright and one crossed slanted line was the shape of it in Kusumā inscription (Table N_{10}), Barāh plate (N_{22}) furnishes a different sign of the numeral which is formed by rightward hooked slants with the numeral *2* like mark in the right portion.

Sign for Hundred

The *su* or *a* like letter form was rarely and generally a vertical hooked with notched top employed for *100* in earlier period. Later on, in Teruṇḍia plate of Śubhakar (Table N_3) it is denoted by letter *lu*.

Sign for Two Hundred

The numeral *200* is represented by adding the sign of two in the form of hundred. Nāgarī letter *lā* like combination is shown in Bodh-Gayā inscription (Table N_5), while signs for *sa* and *2* are combined in Dadhimatīmātā inscription (N_9) and *sā* in Peṭṭasar grant (N_{17}).

Sign for Six Hundred

The sign for letter *sa* is combined with the sign for six to denote *600* in Kusumā inscription (Table N_{10}).

Sign for Seven Hundred

In Sāmolī inscription (Table N_{11}) letter *srā* for hundred mark is combined with hooked seven mark for the numeral *700*.

Sign for Eight Hundred

Barāh plate (Table N_{22}) shows *srā* like letter combined with the sign for eight makes the numeral notation of *800*.

Sign for Nine Hundred

The numeral *900* is denoted by the combination of *srā* and the sign for nine in Dighwā-Dubaulī plate (Table N_{24}) while it is a bit different in Bengāl Asiatic Society's plate (N_{24}), but the basic principle is the same.

Other Signs and Symbols

In inscriptions and manuscripts several signs and symbols are to be found from very ancient times. Very often we are not sure about the phonetic or symbolic value of these signs. Some scholars read the signs found in the beginning of the epigraphs as *Siddham* and others prefer to read them as sign for *Oṁ*. Here we have recorded some such signs and symbols found in the beginning, middle and at the end of the epigraphs and manuscripts for illustration.

Signs for *Oṁ* (Plate 178, A)

Generally, Indian epigraphs and manuscripts begin with an auspicious symbol which is recognised as *Oṁ*. This syllable does not occur in the *Ṛig* veda and the Atharvaveda,[14] but is found in the Vedic rituals where it is mentioned as universe.[15] It is also stated there that, in the sound *Oṁ* there are three *aksharas a, u, ṁ*.[16]

The sound *Oṁ* is expressed by a symbol. The symbolic representation is, in general, drawn as a curl or spiral, turning either to the left or right. It may be a conventional representation of the sacred *śaṁkha* or conch shell. As J.J. Boeles states: "We must presume that the curious curl on which the *Oṁ* maṅgala is based must have derived from the old vowel, *O*, known from Bühler's alphabets."[17]

Dani[18] has arranged *Oṁ* signs under three formal groups: North Indian, West Indian and South Indian. But his South Indian forms are also noticed in Rajasthan, for example his fourth form is met with in Dhulev and fifth in the Vasantgaḍh inscriptions. The North Indian second form is met with in the Sāmangaḍh inscription from Maharashtra. Here an attempt has been made to present various clearly noticeable varieties of this sign under four groups:

(i) leftward spiral forms,

(ii) rightwards spiral forms,

(iii) rare forms and

(iv) evolution of modern form.

Signs for *Jihvāmūtīya* and *Upadhamānīya* (Plate, 178 B & C)

The illustrated forms of *Jihvāmūtīya* are taken from Guhil, Lakkhāmaṇḍal and Jhālrāpāṭaṇ inscriptions; and the forms of *Upadhamānīya* from Guhil (A.D. 653), Vasantgaḍh, Bānskherā, Lakkhāmaṇḍal and Guhil (A.D. 688) inscriptions. Of these, the first is represented by a symbol looking like superscript *v* joined with *ka*; and second by two circles, or above opened curly ended semicircle, or lower bended horn shaped, placed above the letter *pa*.

Signs for Punctuation, Etc. (Plate 178, D)

It is generally averred that the various modern signs of punctuation—namely comma, inverted comma, dash, colon, semi colon, full stop, sign of interrogation, sign of exclamation, several kinds of brackets, etc., were not employed in ancient inscriptions and manuscripts. It is true to some extent. During the earliest period only straight, or curved single stroke was sporadically used for denoting the punctuation mark. In later period a *daṇḍa*, or stroke is drawn to mark the completion of a sentence or a hemistich of a verse and two *daṇḍa*s, or strokes to indicate completion of a verse.

Some maṅgalas and ornamental signs are also drawn in the later portion; or at the end of the inscriptions. A very common sign of this description is a large circle with a smaller one in side.

Notes and References

1. "On the Dynasty of the Sāh kings of Suṛāshtra," *JRAS*, XII, pp. 32-47.
2. "On the Genealogy of modern Numerals," *JRAS*, N.S. XIV, pp. 335-76 & Plates.
3. "The ancient Sanskrit Numerals in the Cave Inscriptions and on the Sāh-coins, correctly made out; with Remarks on the Era of Śālivāhana and Vikramāditya," *JBBRAS*, VIII, pp. 225-33 & Pl.
4. "Foliation of Jaina Manuscripts and Letter-Numerals," *ABORI*, XVIII, pp. 171-86 & Pls.
5. "On the ancient Nāgarī Numerals," *IA*, VI, pp. 42-48, & Pls.

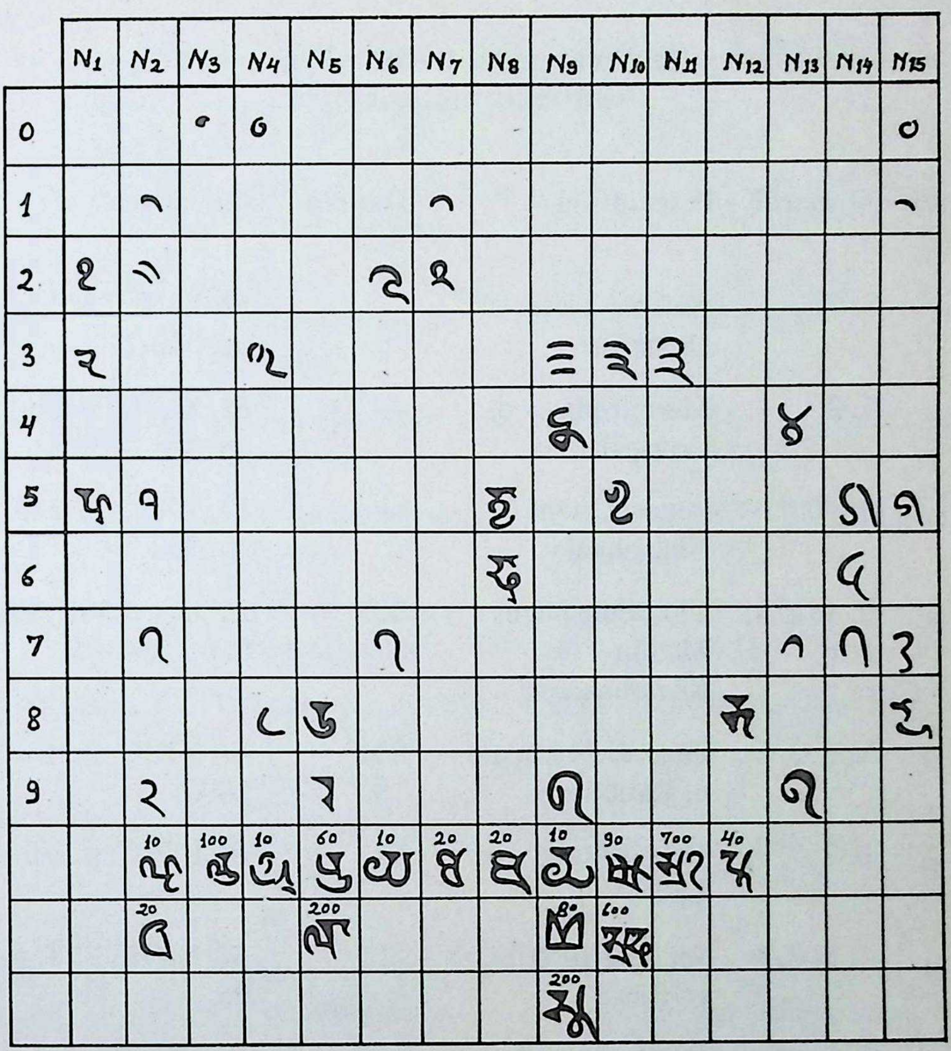
6. *Indian.*, pp. 96-107, & Pl.
7. *Bhāratīya.*, pp. 102-27 & Pls.
8. "On the Evolution of Alphabetic Numerals in India," *JUPHS*, VII, Pt. I (1934), pp. 42-53.
9. *Indian Numerals*, Poona, 1966.
10. *Uttar Bhārat me Aṅko kā Vikās* (Hindi), Varanasi, 1986.
11. Dhruva, H.H., *EI*, II, pp. 19-20, Pl. f., p., 20.
12. Cf., *Sūnyabindava iva vilikhitāḥ*, Subandhu's *Vāsavadattā*, (*c.* early 6th Cent. A.D.), Varanasi, 1967, p., 168.
13. Majumdar, R.C., *The Classical Age*, Bombay, 1962. The genuineness of this record has been doubted.
14. Keith, A.B., *Encyclopaedia of Religion and Ethics*, 1917, vol. IX, p., 490.
15. *Māṇḍūkya Upanishad*, I.
16. *Maitrāyaṇa Upanishad*, 6.3
17. "The Migration of the Magic Syllable Oṃ," *India Antiqua*, Leyden, 1947, p., 44.
18. *Indian.*, Fig. 15b.

References for Plate 175

(6th-8th Century)

Table	Numeral	Inscription	Date in A.D.	Reference
N_1	2, 3, 5	Kailan plate of Srīdhāraṇa	—	*IHQ*, XXIII, Pl. f. p., 237.
N_2	1, 2, 5, 7, 9, 10, 20	Tipperāh grant of Lokanātha	—	*EI*, XV, Pls. b. pp. 308-09.
N_3	0, 100	Teruṇḍia plate of Subhakara II	706	*EI*, XXVIII, Pls. b. pp. 214-15.
N_4	0, 8	Purushottampur plates of Mādhavavarmā II	—	*EI*, XXX, Pls. b. pp. 266-67.
N_5	8, 9, 60, 200	Bodh-Gayā inscription of Mahānāma	588	*IA*, XV, Pl. f. p., 358.
N_6	2, 7, 10	Maṅgarāon inscription of the reign of Vishṇugupta	—	*JBRS*, XXX, Pl. f. p., 201.
N_7	1, 2, 20	Bānskherā plate of Harsha	628	*EI*, IV, Pl. f. p., 210.
N_8	5, 6, 20	Madhuban plate of Harsha	631	*EI*, VII, Pl. f. p., 158.
N_9	3, 4, 9, 10, 80, 200	Dadhimatī-mātā inscription of the time of Dhruhlaṇa	608	*EI*, XI, Pl. f. p., 304.
N_{10}	3, 5, 90, 600	Kusumā inscription	636	*EI*, XXXVI, Pl. f. p., 48.

N_{11}	3, 700	Sāmolī inscription of the time of Śilāditya	646	*EI*, XX, Pl. f. p., 99.
N_{12}	8, 40	Two grants of early Guhilas	654 & 689	*EI*, XXXIV, Pls. b. pp. 172-73 & 174-75.
N_{13}	4, 7, 9	Dhinaki plate of Jāikadeva	738	*IA*, XII, Pls. b. pp. 154-55.
N_{14}	5, 6, 7	Sāmangaḍh plates of Dantidurga	753	*IA*, XI, Pls. b. pp. 110-11 & 112-13.
N_{15}	0, 1, 5, 7, 8	Daultābād plates of Śaṅkaragaṇa	793	*EI*, IX, Pls. b. pp. 196-97 & f. p., 198.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9
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100
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60
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20
20
10
90
700
40
20
200
80
600
200

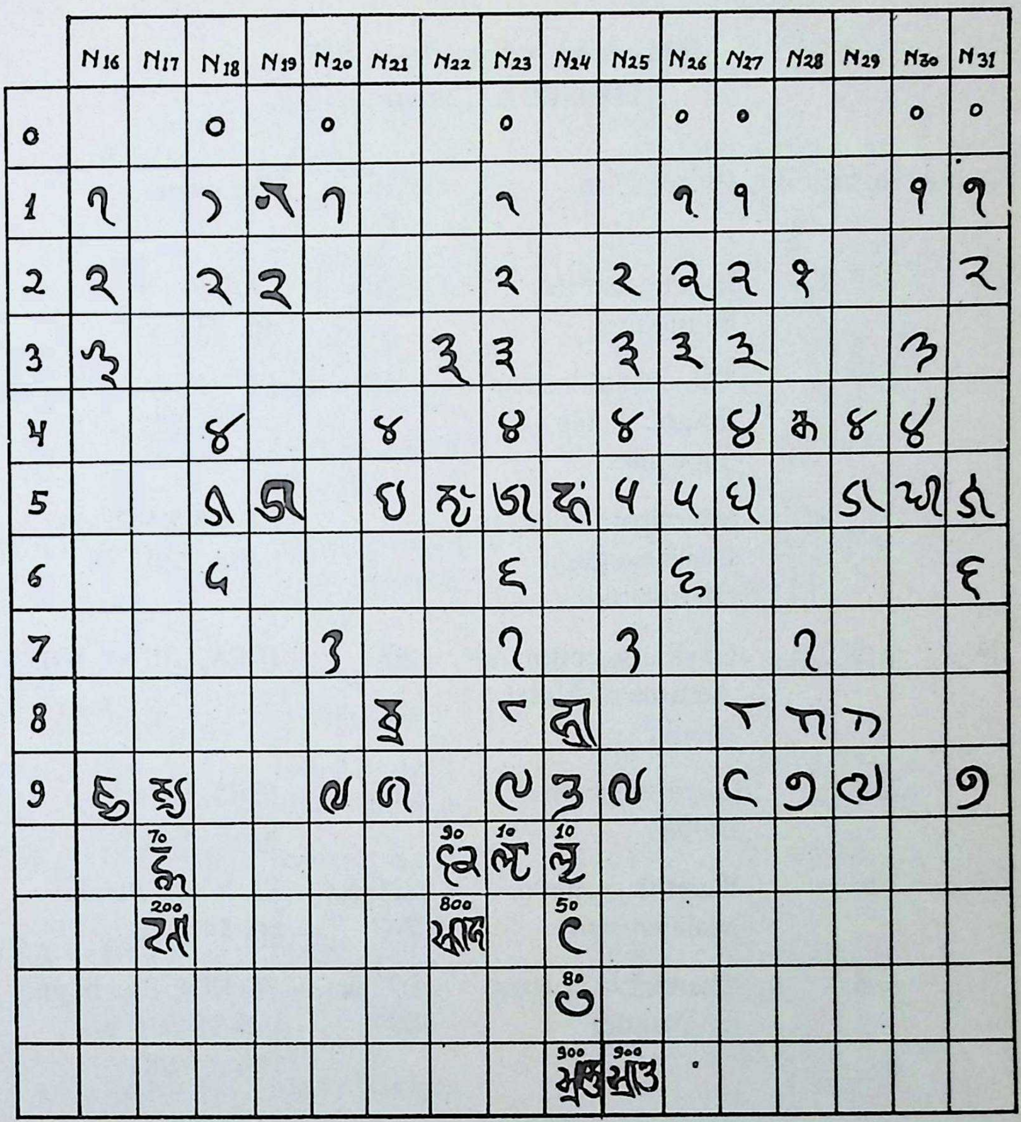
NUMERALS

References for Plate 176
(9th-10th Century)

Table	Numeral	Inscription	Date in A.D.	Reference
N_{16}	3, 9	Nālandā plates of Devapāla	—	*EI*, XVII, Pls. b. pp. 320-21.
	1, 2	Mungir plates of Devapāla	—	*EI*, XVIII, Pls. b. pp. 304 & 306.
N_{17}	9, 70, 200	Peṭṭasar grant of Neṭṭabhañja	—	*EI*, XXVII, Pls. b. pp. 338-39.
N_{18}	0, 1, 2, 4, 5, 6	Chicācole plates of Madhu-Kāvarṇṇadeva	923	*JBORS*, XVIII, Pls. b. pp. 294-95.
N_{19}	1, 2, 5	Pāṇḍukeśvar plate of Lalitāsura	854	*EI*, XXXI, Pl. f. p., 280.
N_{20}	0, 1, 7, 9	Dewal Praśasti of Lalla	—	*EI*, I, Pl. f. p., 76.
N_{21}	4, 5, 8, 9	Jodhpur inscription of Bāuk	837	*EI*, XVIII, Pl. f. p., 96.
N_{22}	3, 5, 90, 800	Barāh plate of Bhoja	836	*EI*, XIX, Pl. f. p., 18.
N_{23}	1 to 10	Āhar inscription of the time of Bhoja	865	*EI*, XIX, Pl. f. p., 60.
N_{24}	5, 10, 50 900	Dighwā-Dubaulī plate of Mahendrapāla	898	*IA*, XV, Pl. f. p., 112.

	8, 9, 80, 900	Bengāl Asiatic Society's plate of Vināyakapāla	931	*IA*, XV, Pl. f. p., 140.
N_{25}	3, 5, 9	Karitalāī inscription of Lakshmaṇa I	840	*CII*, IV, Pl. XXXA.
	2, 4, 7	Chandrehe inscription of Prabodhasiva	973	*CII*, IV, Pl. XXXIV.
N_{26}	0, 1, 3	Two Harasol grants of Siyaka	—	*EI*, XIX, Pls. b. pp. 242-43.
	2, 5, 6	An odd plate of Siyaka	969	*EI*, XIX, Pl. f. p., 178.
N_{27}	2, 8, 9	Puśkar inscription of Durgarāja	925 & 937	*EI*, XXXV, Pl. f. p., 242
	0, 1, 3	Thanwala inscription of the time of Siṁharāja	956	*EI*, XXXV, Pl. f. p., 243.
	4, 5	Jodhpur fragmentary grant of Siṁharāja	997	*EI*, XXXVI, Pl. f. p., 46.
N_{28}	2, 4	Javakheḍ plates of Amoghavarsha	820	*EI*, XXXII, Pls. b. pp. 130-31, 132-33 & f. p., 134.
	7, 8, 9	Gujarāt plates of Dantivarmā	867	*EI*, VI, Pls. b. pp. 290-91 & f. p., 294.
N_{29}	8	Chinchani plates of Indra III	926	*EI*, XXXII, Pls. b. pp. 52-53.
	5	Sangli grant of Govinda	933	*IA*, XII, Pls. b. pp. 250-51.

	4, 9	A grant of Amoghavarsha	972	*IA*, XII, Pls. b. pp. 266-67.
N_{30}	0, 1, 3, 4, 5	Grant of Mūlarāja of Anhilavāḍa	986	*IA*, VI, Pls. b. pp. 192-93.
N_{31}	1, 5, 9	Janjirā plates of Aparājita	993	*CII*, VI, Pls. IX–XII
	0, 2, 6	Bhādān grant of Aparājita	997	*CII*, VI, Pls. XVIII–XX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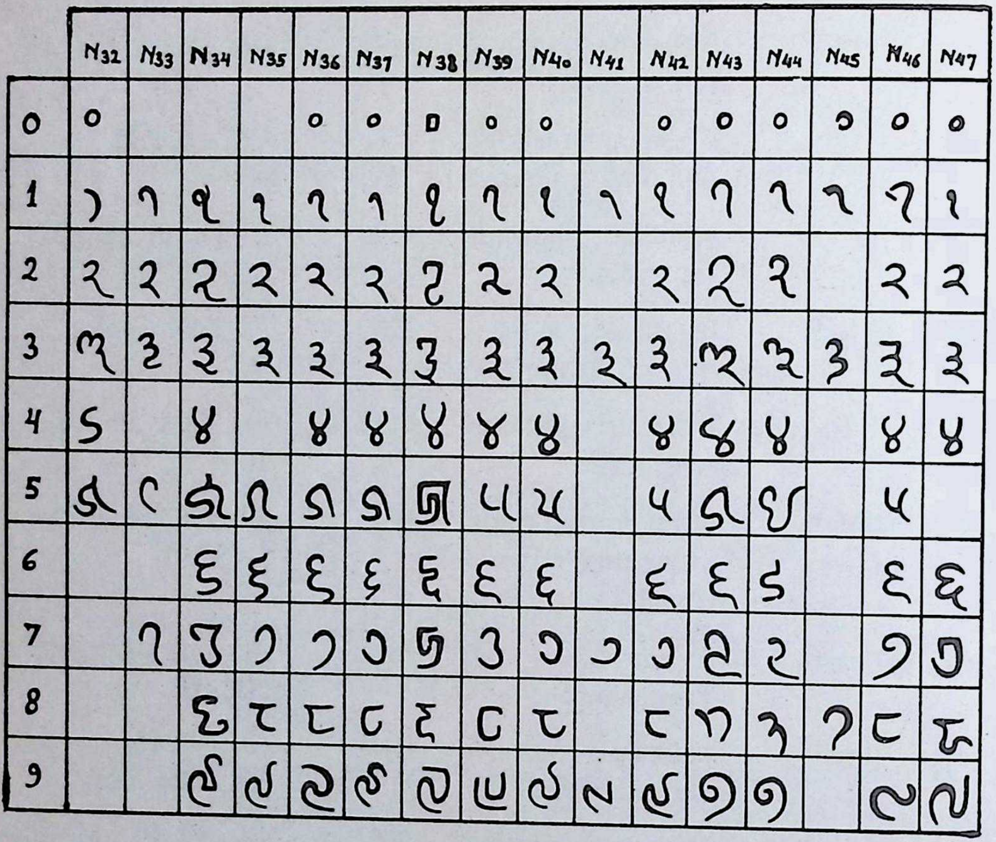
5
6
7
8
9
70
200
90
800
10
10
50
80
900
900

NUMERALS

References for Plate 177
(11th-13th Century)

Table	Numeral	Inscription	Date in A.D.	Reference
N$_{32}$	0, 1, 4, 7	Bihar grant of Śaurāditya	1020	*EI*, XXXV, Pls. b. pp. 134-35.
	2, 5	Tarachaṇḍi inscription of Pratāpadhavala	1168	*EI*, XXXIV, Pls. b. pp. 26-27.
	3	Mahulpārā plates of Mahāśivagupta-Dharmarath	—	*EI*, XXXVII, Pls. b. pp. 228-29.
N$_{33}$	1, 5, 7	Gayā inscription of the time of Muiz-zuddin	1200	*JBRS*, LII, Pl. VII.
	2, 3	Gayā epigraph of Balban	1268	*JBRS*, LIII, Pl. XXXIV.
N$_{34}$	1 to 9	Kurethā grants of Malayavarmā	1220 & 1247	*EI*, XXX, Pls. b. pp. 148–49.
N$_{35}$	6, 8	Chandrāvatī plates of Chandra	1093 & 1097	*EI*, XIV, Pls. b. pp. 194-95 & f. pp. 196 & 198.
	1, 2, 3, 5, 7, 9	Some Gāhaḍavāl grants	—	*EI*, XXXV, Pls. b. pp. 208-09, 212-13, 214-15, & 218-19.
N$_{36}$	0 to 9	Ratanpur inscription Jājalla I	1114	*CII*, IV, Pl. LXVA.

N_{37}	0 to 9	Konī inscription of Prithvideva II	1148	*CII*, IV, Pl. LXXIII.
N_{38}	0 to 9	Ajayagaḍh inscription of Kirttıvarmā	—	*EI*, XXX, Pl. f. p. 90.
N_{39}	0 to 9	Māndhātā plates of Devapāla	1225	*EI*, IX, Pls. b. pp. 110-11.
N_{40}	0 to 9	Inscription of the time of Hammīr	1288	*EI*, XIX, Pl. f. p., 50.
N_{41}	1, 3, 7, 9	Pāldī inscription of Arisiṁha	1116	*EI*, XXX, Pl. f. p., 10.
N_{42}	0 to 9	Baraudī inscription of the time of Gopāla	1279	*EI*, XXXIII, Pl. f. p., 34.
N_{43}	0 to 9	A grant of Trilochanpāla	1050	*IA*, XII, Pls. b. pp. 202-03.
N_{44}	0 to 9	Thāṇā plates of Mummunirāja	1048	*CII*, VI, Pls. XXXVII-XLI.
N_{45}	0, 1, 3, 8	Bassein inscription of Mallikārjuna	1161	*CII*, VI, Pl. LXVII.
N_{46}	0 to 9	Methī inscription of Kṛishṇa	1254	*EI*, XXVIII, Pl. f. p., 319.
N_{47}	0, 1, 2, 3, 4, 6, 7, 8, 9	Grants of Mahārājakula Jayasiṁha	1290	*EI*, XXXII, Pls. b. pp. 222-23 & f. p., 225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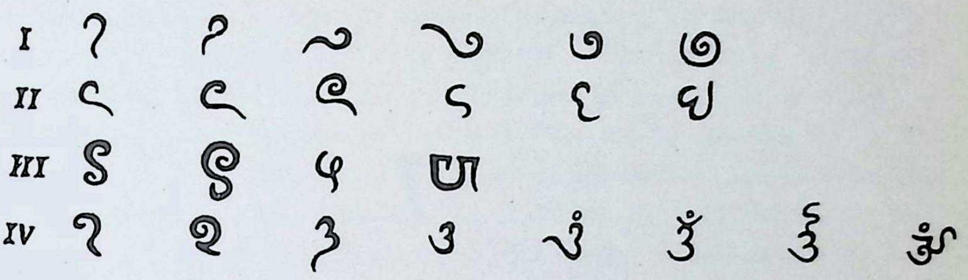
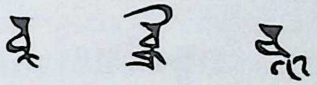
NUMERALS

MISCELLANEOUS SIGNS

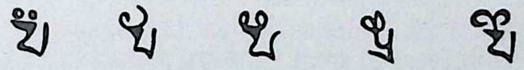
A. SIGNS FOR OM



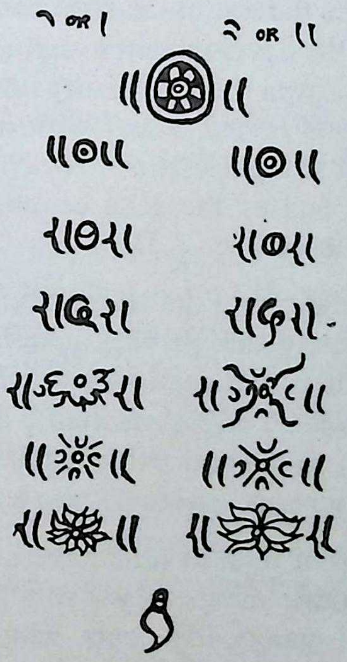
B. JIHVĀMULĪYA



C. UPADHMANIYA



D. PUNCTUATION MARK ETC.



7

Conclusions

Nāgarī is the outcome of evolutionary process of Mauryan Brāhmī script and any consideration on its independent origin is superfluous. From Mauryan to the middle of the sixth century A.D., only a few letters resemble counterparts in Nāgarī. While towards the end of the sixth century, with the emergence of the Kuṭila alphabet, the development in alphabet towards Nāgarī moves fast. Most of the letters, from the 7th century onwards undergo the process of development in forms of the letters with only the difference of full covering head-line and straight vertical. All characteristics of the Nāgarī appear first about the end of the 10th century and approaches mature Nāgarī form by the 13th century A.D.

There are some variations in the Nāgarī script of different regions due to various factors, namely the writing material, the writing technique, different schools of writers and engravers and their individual interest and mannerisms, etc. However, script maintains a sort of unity during the developmental process. Some noticeable factors which are responsible for such type of development are reviewed below:

Learned persons from time to time have migrated from one place to the other and among other things they also affected writing styles. Rājaśekhara has stated that many early poets, who had travelled widely, had benefited their country-men by making use of their experience in those alien lands in their literary compositions.[1] Rājaśekhara himself was a Maharashtrian Brāhmaṇa, stayed in the court of the Imperial Pratihāras, married a Chāhmāna lady Avantisundarī[2] king Indra III. The Kashmiri, poet, Bilhaṇa, travelled to South India and in the court of king Vikramāditya of Kalyāṇa, he composed his *Vikramāṅkadeva Charitra*.[3] Jayānaka, the noted Kashmiri poet, made a journey to the court of Pṛithvirāja III. Dhanapāla, of U.P., spent a major part of his life at the court of Paramāra rulers and lastly settled at Satyapura in Rajasthan. Similarly, Śrīharsha, who was probably a Bengali by birth, was patronised by Jayachandra, the Gāhaḍavāla king of Kanauja.[4] This point becomes more clear by the example of Paṭṭadakal pillar inscription of the time of Chālukya Kirtivarmā II (A.D. 754) which was engraved in the southern as well as in proto-Nāgarī characters. The northern characters were surely due to the Brāhmaṇas from Northern India, for whom the pillar was set up.[5] Sometimes, it is also noticed that the writer and engraver belonged to two distinct places and might have influenced the alphabet considerably.[6]

Along with the writers and engravers the donee also had a role in the migration of the script. For example, most of the Rāshṭrakūṭa grants written in proto-Nāgarī or Nāgarī were donated to the Brāhmaṇas who had come from the different parts of Northern India. It may be due to the fact that perhaps the receiver of the charters did not follow the matter written in southern scripts or the donor was under the influence of these learned scholars.

The establishment of larger kingdoms also encouraged a uniform system of writing within the dominions where divergent systems were prevalent. In consequence many diversities of the alphabet disappeared and with the skilled hand of the royal writer and engraver the script developed in unidirection. Sometimes writers were chosen from the newly conquered country by the king.

Raids and conquests from time to time have also shared in the migration of scripts. For example with the expansion of Harśha's power, in the early part of the 7th century, the script of the west reached the Middle

Gaṅgā Valley. Nāgarī seems to have infiltrated into the Punjab in the wake of the armies of king Bhoja of Mālava and Karṇa of Tripurī, which came to liberate it from the Turks and reached up to Kāṅgaḍā. The first Nāgarī inscription in the Punjab is a Jaina record of A.D. 1240 at Baijanāth.[7]

Sometimes the writers and engravers were brought from the important centres. As V.B. Kolte states:

> It may be that after the victory of Indra III over Kanauj and the temporary exile of king Mahīpāla, Rājaśekhara had gone to the royal court of the Rāshṭrakūṭas and stayed with Indra III where he might have composed this panegyric.[8]

Several important educational centres were established by the philomath kings, where people used to come from different parts of the country to take education. Varanasi was one such centre[9] which attracted students from far-off places. Mammaṭabhaṭa, a native of Kashmir, had his early education at Varanasi.[10]

Kanauj was another great centre of learning. This centre produced several learned scholars like Rājaśekhara, Kshemeśvara, Bhaṭṭa Lakshmidhara, Śrīharsha & c. who served in the royal court of Kanauja.

Kashmir too was an important educational centre.[11] Students from distant places like Pāṭaliputra and Bengal went there to study.

In Rajasthan, there were several educational centres like Bhīnmāl, Ābū, Chitor, Ajmer, Kumāravihāra. Valabhī was a great and renowned centre flourishing in Kāṭhiāwāḍa. Dhāra and Māṇḍu were the important educational centres of Madhya Pradesh. Pāṭaliputra was the important seat of learning in Eastern India.

Different types of persons were engaged in writing works. Royal charters were generally written by the skilled hand of professional writers and engraved by artists. Public records were often written and engraved by the persons who were generally not professional or skilled writers. Due to these factors the royal inscriptions show the use of a standard form of writing whereas different new apprentices were given a chance to work on personal records. Likewise, the religious manuscripts were very often copied in their old characters which made the script conventional. The divergence of Jaina-Nāgarī is a good example of it. In day-to-day writing, copyists were not bound to use only the standard form of letters. In consequence rapid evolution took place in such types of work. The writing style, writing materials, the taste for ornamentation, desire for speed, etc., all affected the course of the development of scripts. It is surely the consequence of speedy writing in daily use which is responsible for the development of cursive scripts like Gujarātī, Mahājanī, Kaithī, etc. Apparently, these scripts ultimately developed from Nāgarī with a view to write with speed.

With the expansion of Muslim power and extinction of the Hindu kingdoms after 12th century A.D. the task of inscription writing subsequently became secondary specially in Northern India because there was a fall in tradition of landgrants. Manuscript writing had become the common tradition and almost a religious practice, especially among Jainas with a view to escape destruction by the Muslim invaders. But in manuscript writing copyists generally tried to follow the old alphabet too, and therefore the development in script became stagnant after the 13th century A.D. With the invention of the printing press and the typewriter, script became fully stereotyped and standardised. Now only the standard forms are employed in such type of works so the natural path of evolution of alphabets has become blocked. Now the necessities of the press and the demands of smaller types are so important that any change in the script can be thought of only with a view to suit the machine.

Thus it can be concluded that the Nāgarī script developed from the Mauryan Brāhmī for about sixteen centuries and then after the thirteenth century A.D. onwards it became almost stagnant. The mechanization during last hundred years or so has standardised the alphabet. If there is any future for the Nāgarī it is bound with mechanical needs.

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2. *Karpūramañjarī*, I, 11.
3. Sharma, B.N., *Social and Cultural History of Northern India* (*c*. 1000-1200 A.D.), 1972, New Delhi, p., 50.
4. *Ibid.*
5. Fleet, J.F., *EI*, III, p., 5: "*Gaṁgāyā uttara-kule Mṛigthaṇikāhāra vishayādihāgatena.*"
6. Bühler, "The Dewal Praśasti of Lalla the Chhinda, "*EI*, I, p., 81:
   "*Vishṇuharestanayena*cha *Likhitā Gauḍena Karaṇikenaishā* ।
   Kuṭilāksharāṇi vidushā Takshādityābhidhānena ॥

   Kanyakuvjāgatenāpi kāmadevasutena cha ।
   Utkirṇṇā Somanāthena Ṭaṅkavijñānaśalinā ॥"
7. Vidyalankar, Jaya Chandra, *The Language and Script Problem in Punjab*, Hindi Bhavan, 1966, p., 110.
8. "Two grants of Rāshṭrakūṭa Indra III from Vajirkheḍa," *EI*, XXXVIII, p., 14.
9. The Rewah inscription of Malayasimha of A.D. 1192 mentions that Purushottam, the composer of the praśasti and also an inhabitant of Varanasi, was well-versed in Logic, Grammar, mimāṁsā, Vedānta and Yoga philosophy, *EI*, XIX, pp. 26-27.
10. Ray, S.C.. *Early History and Culture of Kashmir*, Calcutta 1957, p., 180.
11. *Ocean of Stories*, V, Motilal Banarsidass, 1968, pp. 178-79; Sachau, *Al beruni's*., I, p., 22.

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शीर्षक Development of Nagari script

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